

American Aviation

The Independent Voice of American Aeronautics

JULY 1, 1945

The Road Ahead

A VERY good case can be made out that the most important development in the air in this war has not been the fighter or the bomber, but the transport airplane. And by the same token a very good case can be made out that the real future of air power in the United States is a vast peacetime development of commercial aviation.

If some of the astute authorities are correct that jet propulsion and rockets and other pilot-less weapons are in the same state of development in this war that the piloted military

aircraft was in during the last war, then one may well say that at least certain types of military airplanes have reached their peak of importance and development during the past few years and that aviation will move into another sphere in which the rocket will spearhead the military aspect, and the piloted aircraft will be devoted to numerous important uses as vehicles for transportation.

When the war came this time the Army had only to turn to the automobile industry for its multitude of trucks and other automotive equipment simply because the truck which was developed in the first world war had led to a vast peacetime industry building private automobiles and trucks for commercial uses. By the same token the greatest resource which the Army and the Navy can have at its command is a vast commercial industrial establishment engaged in producing commercial airplanes.

It is astounding when one reviews the events of the past two years the utmost reliance being placed today upon the aircraft as a transport vehicle. The movement of men across the North Atlantic this summer is not a mere novelty or an isolated event, but is a living demonstration of what we can expect in all future military operations—a prelude to the day, if that day comes, when whole armies will be moved swiftly by air.

It is also somewhat amazing as one reviews the past few years the golden opportunities lost by the public relations and advertising departments of our aircraft manufacturing companies for their failure to utilize the vast amount of advertising space at their command for intelligent presentations of what the aircraft is doing to re-mold this world and how important the aircraft will be in our future domestic and international relations. Only in isolated instances has this

(Turn to page 6)

Fortnightly Review



New Taylorcraft President

Nash Russ recently was elected President of Taylorcraft Aviation Corp., to succeed James C. Hart resigned. Russ also is chairman of the board of Taylorcraft, and heads Detroit Aircraft Products, and Detroit Aviation Corp., as president.

In This Issue

Industry Generally Favors Revised Air Rules

Pressure exists for still further simplification.....15

India Will Spend 46½ Millions on Airlines

Expenditures will include airports and navigational facilities19

Aeronautical Radio Forms Mexican Subsidiary

New company will operate as a non-profit corporation23

Beech and Cessna Agree on Consolidation

No change in management proposed75

Aviation Corp. Acquires Control of Crosley

Assumes prominent place in radio field84

25c



"A rose... by any other name..."

As one William Shakespeare so aptly limned... Is still the same sweet flower.

And while we concede... that it's a far cry
from the immortal bard to modern aerial combat, our point is just the same...

For the P-47* is the same sweet ship by any other name.

Thunderbolt... Superbolt... Thunderbomber... Black Death...
and from one enthusiastic pilot, the significant appellation "Frank Buck" serves
to emphasize the fact, that here is a plane
which not only performs its varied operational demands, but has established, as well,
a most enviable reputation for "Bringing 'em back alive."

*Combat pilots who have flown all types of Fighter Planes
are unstinting in their praise of Thunderbolt versatility.



REPUBLIC



AVIATION

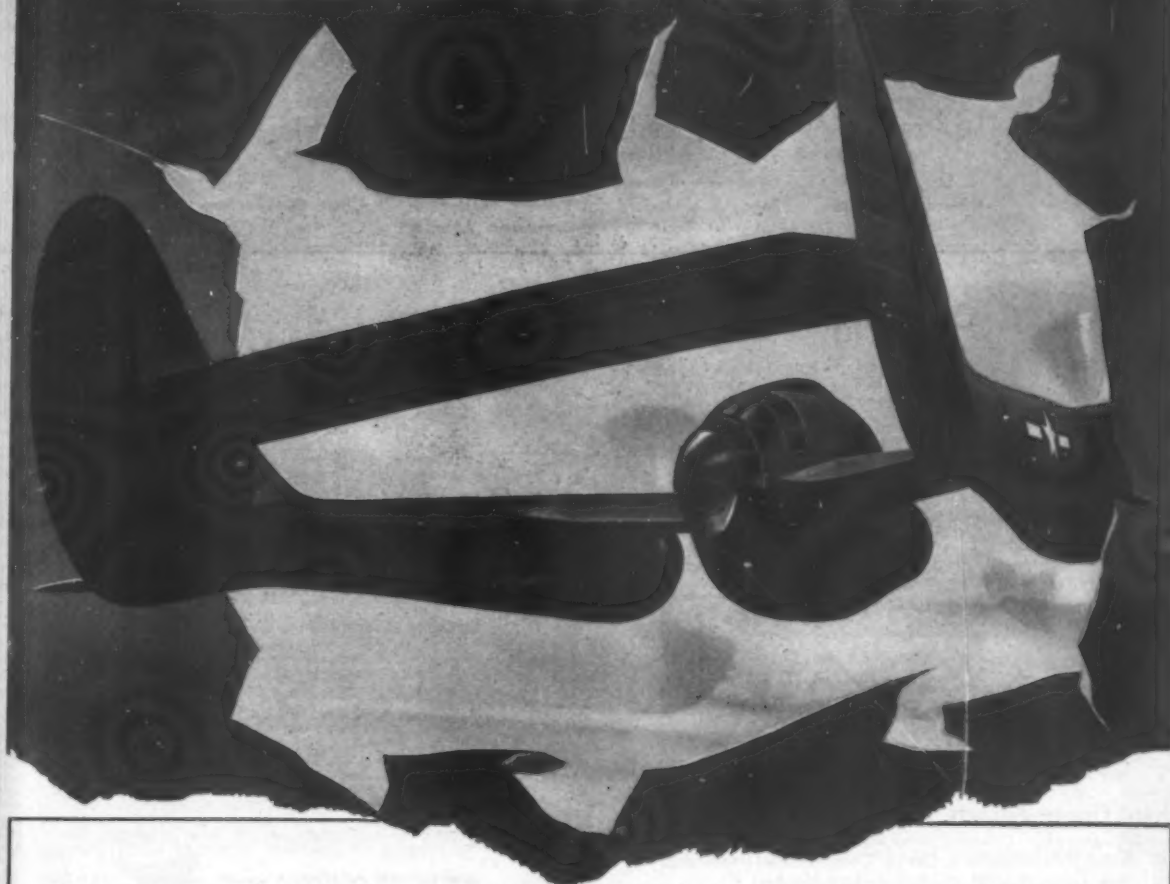
CORPORATION

Farmingdale, L. I., N. Y.

Makers of the Mighty Thunderbolt

Evansville, Ind.

GOOD YEAR AIRCRAFT PRODUCTION REPORT



CONTRACTS: W535AC-29319 • DAW535AC-1044
W33-038AC-2407 • W535AC-21061

NORTHROP P-61 BLACK WIDOW

**OUTER WING PANELS, ELEVATORS, RUDDERS,
STABILIZERS AND FINS**

CONTRACT RECEIVED: *DECEMBER 1941*
FIRST PRODUCTION UNIT DELIVERED: *JUNE 1943*
500TH PRODUCTION UNIT DELIVERED: *NOVEMBER 1944*

REMARKS: After going into initial production on Northrop's design, Goodyear Aircraft kept pace with engineering changes, resulting in greater combat performance as well as more efficient manufacture. Recently, Goodyear Aircraft engineers, in cooperation with Northrop, have completed a project which will further improve this deadly night fighter.

Goodyear is building components for 16 different Army-Navy types of aircraft, including complete Corsair fighters and airships.



GOODYEAR AIRCRAFT CORPORATION, Akron, Ohio

Litchfield Park, Arizona

American Aviation

Volume 9, Number 3

The Independent Voice of American Aeronautics

July 1, 1945



Wayne W. Parrish, Editor and Publisher



Eric Bramley
Executive Editor

Kenneth E. Allen
Managing Editor

William L. Thompson
News Editor

Clifford Guest
Editorial Associate

Thomas E. Lindsey
Business Manager

Sydney Carter
Transport Engineering

Gerard B. Dobben
Legislation

Peggy G. Hereford
West Coast

Barbara McNamee
Government Agencies

Albert G. Sweetser
International

Helen L. Walsh
Editorial Assistant

Department Editors

CONTENTS

General News

Industry Generally Favors Revised Air Regulations	15
ATC Cargo-Handling Sets Postwar Commercial Pattern	16
India Will Spend 46½ Million on Civil Airlines	19
National Planning Ass'n Urges Industry be Kept Intact	20
American Aviation Associates Wins Court Victory	21
Curtiss Seahawk Newest Navy Observation Plane	22
Aeronautical Radio Forms Subsidiary in Mexico	23

International

Scotland Wins Concessions from Air Ministry	25
War Makes Changes in South American Aviation	28
Canada Plans Pacific Operations on Large Scale	32

Legislation

Multiple Tax Problem Dealt With in New Bill	36
ALPA's Behncke Favors Controlled Competition	38

Military

Jap Air Force Reported Greatly Weakened	41
---	----

Private Flying—Airports

Private Pilot Licensing May Be Accelerated	47
British Fog Dispensing Device Commercially Impractical	49
New Concept Used in Small Airport Hangars	50

Transport

United Expects to Employ 18,000 by 1949	52
Few Airports Used by Airlines in Class 5 or Better	54
NAL Discloses Plans for Feeder System	56
New CAA Instrument Approach Cuts Landing Time	62

Transport Engineering

Full Scale Mock-ups Used by UAL in Transport Tests	66
Wide Range of Devices Speed Maintenance Efficiency	70
Design Changes in Internal Wrenching Bolts Lower C-54 Costs	70

Manufacturing

Beech and Cessna Agree on Consolidation Terms	75
British Seek Export Outlets in Effort to Regain Trade	76
125 Types of Surplus Aircraft Approved for Civilian Flying	77

Financial

Aviation Corp. Acquires Control of Crosley	84
--	----

Other Features

Editorials	1	CAB Proceedings	62
Letters	9	New Air Services	62
Books	9	Airline Personnel	64
Booklets	9	Engineering Preview	72
Wings of Yesterday	10	Manufacturing Personnel	79
Trend of the News	12	Down the Manufacturing Line	80
Airline Commentary	58	Financial Reports	85

Regional Representatives:

Chicago—Harry W. Brown, Wrigley Bldg., 410 N. Michigan Avenue, Chicago 11, Ill., Superior 8436.
Los Angeles—Peggy Guetter Hereford (Editorial); O. R. Elofson (Advertising) 1404-S Park Central Bldg., 412 W. Sixth Street, Los Angeles 14, Cal. Trinity 7977.
New York—O. R. Elofson, 2207 R.K.O. Bldg., 1270 Sixth Avenue, New York 20, N. Y. Circle 6-9446.
London, England—James Stanton (Editorial); J. Forecast, Edwin Greenwood, Ltd., Thanet House, Strand, London, W. C. 2, England.
Melbourne, Australia—N. Hughes-Jones.
Auckland, New Zealand—Leo White.

American Aviation is published the 1st and 15th of each month by American Aviation Associates, Inc., American Building, 1317 F Street, N. W., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for the United States, Mexico, Central and South American countries—\$4.00 for 1 year; \$7.00 for 2 years. Canada—\$4.50 for 1 year; \$8.00 for 2 years. All other countries—\$5.50 for 1 year; \$10.00 for 2 years. Entered as Second Class matter in Washington, D. C., and Harrisburg, Pa.

Publishing Corporation: American Aviation Associates, Inc., Wayne W. Parrish, President; Col. Albert H. Stackpole, Vice President (in active military service); Eric Bramley, Vice President; Brig. Gen. E. J. Stackpole, Jr., Treasurer (in active military service); Thomas E. Lindsey, Sec'y.

Other Publications and Services:

American Aviation Daily: The only daily news service for the aviation industry. Published daily except Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: \$15 one month, \$170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (\$2 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. ALBERT G. SWEETSER, Managing Editor.

American Aviation Directory: Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy \$5.00; annual subscription (two successive editions) \$7.50. Spring-Summer 1945 issue now available. HELEN L. WALSH, Managing Editor.

American Aviation Traffic Guide: Monthly publication of airline schedules, rates and regulations for passenger and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions U. S. and Latin America \$5.00 one year (12 issues and supplements); Canada \$5.50. All other countries \$6.50. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. B. WHITNEY, Managing Editor.

American Aviation Reports: Current financial and traffic statistics on all domestic airlines as reported to the Civil Aeronautics Board. Includes monthly and semi-annual summaries. Yearly subscription comprises over 500 separate reports. \$175 one year; \$100 six months; \$20 one month. Special statistical and research work for subscribers at cost. HAZEL W. REHBERGER, Research Editor.

American Aviation Book & Periodical Department: For the convenience of subscribers in ordering aeronautical books and journals in the U. S. and throughout the world. Address inquiries to American Aviation Book and Periodical Department, American Building, Washington 4, D. C.



HAYES
AIRCRAFT
Wheels and Brakes



1ST TO LAND!

Official U. S. Marine Corps Photo

This Marine Corps observation plane -- a Consolidated Vultee Stinson L-5 equipped with Hayes Wheels and Expander Tube Brakes -- was first to land on Iwo Jima, on the captured Motoyama airfield.

Hayes Industries is proud to provide "the war bird's feet" on thousands of military and naval aircraft... meeting all loads and landing speeds, ranging from bombers to fighters, from transports to trainers, and on all navy flying boats (beaching wheels and brakes).



On U. S. 4-engine bombers: Boeing B-29 Superfortress and B-17 Fortress; Consolidated B-24 Liberator and others to come... on transports such as Curtiss C-46 Commando..... Hayes Wheels and Expander Tube Brakes are standard.

Western Representative: Airsupply Co., 3939 W. 3rd St., Los Angeles 36, Calif.

HAYES INDUSTRIES, INC.

Home Office: JACKSON, MICHIGAN, U. S. A.

(Continued from page 1)

big resource of public attention been utilized to bring to the consciousness of the public the real achievements of the airplane and what the air age will mean to the individual and the nation socially, politically and economically.

The emphasis has been on the fire power of a certain military aircraft and how its engine power is the greatest ever achieved and all that other type of purely topical material which holds the attention of the reader momentarily but does nothing to make him believe that the aircraft is anything more than a wartime necessity and/or nuisance. If one wishes to examine the reasons why the vast amount of advertising space utilized by the manufacturers has been wasted on trivialities of the moment, one doesn't have to go far. The truth of the matter is that relatively few people in the manufacturing industry, especially the newcomers in the public relations field, have stopped to find out what it is that they are manufacturing.

All of us who are vitally interested in the aviation business might as well realize that as soon as the shooting is over on this current chapter of world history the American people are going to lose interest very rapidly in maintaining huge appropriations for aerial weapons in which they will then have no further direct interest, and no amount of scaring or frightening them will change their views. They can only be sold something that contributes socially, politically and economically and the military aspect will have to be sugar-coated. Military aviation served up in the raw in peacetime is like serving quinine and the only solution is to coat the quinine with something palatable.

We heard the other day of a radio program being rehearsed by an advertising agency for the benefit of aircraft industry public relations men and the program starts out with an air raid siren and a phoney Japanese accent warning the populace of the proximity of Tokyo in the next war. This blunt approach is all tommy-rot and we sincerely hope the public relations men of the industry will finally find more productive uses for their money than engaging in radio programs of this or any other nature.

The big job which we have failed to do in this war is to tell the world about the aircraft which we can build. Our friends, the British, are a thousand miles ahead of us in realizing a few fundamentals and unless we move very rapidly we are going to find that the very large sums of money spent during the war on four-colored artistic advertising to the U. S. public has been largely wasted and the job of cultivating a world market for peacetime aviation remains uncomplicated—and the money all gone.

We may be entirely wrong, but a good case can be made out that from here on out commercial aviation will expand and develop far and above the military, and that the military that has prodded and led the way in many respects during the past twenty years will bear somewhat the same relationship to the industry as it did to the automobile industry in the five years before the war. That is, they will do the planning but they will have active commercial aircraft plants, not mere tax-supported standby plants, to rely upon when they need help.

We don't have to worry too much about military air power if commercial aviation moves ahead as it should. But a very important part of this expansion is dependent upon a world market and it is here that we have fallen down on the job miserably. We have had pretty pictures of military airplanes printed in just about every periodical between Johannesburg and Attu, but we have utterly neglected the real story of the air age and what the aircraft is all about. We paint wonderful word pictures of how many rivets go into a wing and all about the caliber of the guns, and each manufacturer makes grandiose claims about his own product (to the utter confusion of the lay public), but we haven't done an over-all job of telling how the airplane can be utilized for the benefit of the average man when the shooting is over.

The public relations men in the industry have been living in a period of master-minding company and industry politics and destiny, producing endless house organs which may or may not contribute to morale, and endless talk about minute details of organization. Now before the money is all gone and wasted, some realistic thought should be given to a concerted program beneficial to the entire industry and directed to the peoples of all the world. Our export market is likely to take a real beating otherwise, and on the export market a great peacetime industry can be built to insure America's future air power.

Outright Gyps

WE HAVE a friend who purchased last January a twin-engined surplus airplane. It was an airplane of the type used widely in the war for patrol work and numerous other types of flying.

The CAA won't certificate it. Not long ago the CAA announced that it would not certificate any of this type.

Yet, why was the airplane put on sale by the RFC? Even assuming that the RFC notified the purchaser that it could not be certificated without being rebuilt, the RFC has no business taking money for such stuff. "Let the buyer beware" is obsolete in these days.

The present plane disposal policy is doing more to harm aviation than anything we know of. No airplane should be sold that can't be certificated either immediately or after minor alterations.

The whole disposal business is off-color.

To the Unknown Director

IN KEEPING WITH the spirit of the season and the summer humidity of Washington, we hereby present the Distinguished Aviation Medal to the Unknown Director of an Aviation Company who, during the past twelve months, (1) did not try to expert the management of his company after a three-hour visit to the company's offices or (2) suggest umpteen postwar suggestions to the management or (3) who expressed unqualified confidence in the company management without asking sixteen hundred silly questions.

WAYNE W. PARRISH

military
d as a
pansion
ere that
e have
nted in
nesburg
ne real
about
y rivets
e guns,
s about
he lay
telling
of the

e been
and in-
house
le, and
t. Now
realistic
bene-
peoples
o take
arket a
insure

uary a
rplane
work

CAA
s type.
RFC?
chaser
ebuilt
stuff.
ys.

ore to
plane
medi-

d the
resent
nown
e past
nage-
o the
stwar
essed
ment

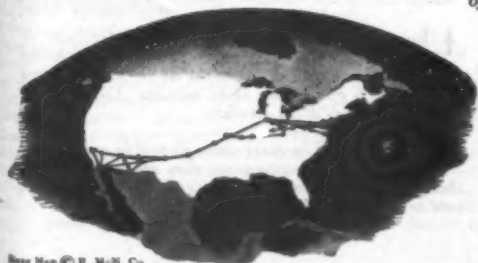
SH

45



LIKE A DIAMOND IN THE SKY

++ Travel TWA at night and you're moving through a world
of diamond-studded skies, moon-silvered rivers and cities heaped like jewels
on the black velvet of the land. Those are the beauties we want you to
remember, even in this hurried time of essential traveling. So the skill
of the TWA Captain at the controls, the solicitude of courteous TWA
Hostesses, the comfort of TWA planes are all blended to
make your trip memorable—a bright diamond
of pleasant relaxation snatched from the sky.



Base Map © R. McN. Co.

TWA
POINTS THE WAY

Don't travel unless your trip helps win the war

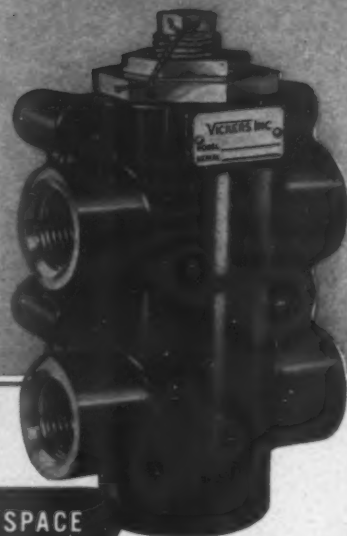
ONLY 35 psi PRESSURE INCREASE Over Volume Range From 1 to 16 gpm

Valve Model No. AA-11248 (AN 6200-8AB)

Normal AN Rating . . . 6 gpm

Max. Recommended Cap . . . 9 gpm

VICKERS AIRCRAFT HYDRAULIC Balanced Piston RELIEF VALVE



SAVES WEIGHT and SPACE

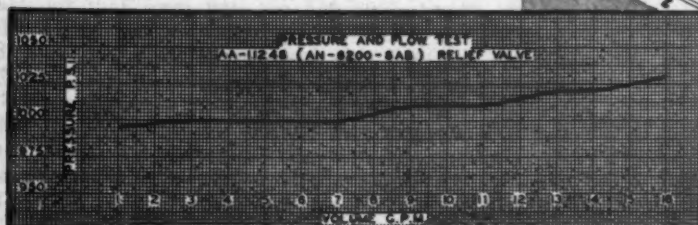
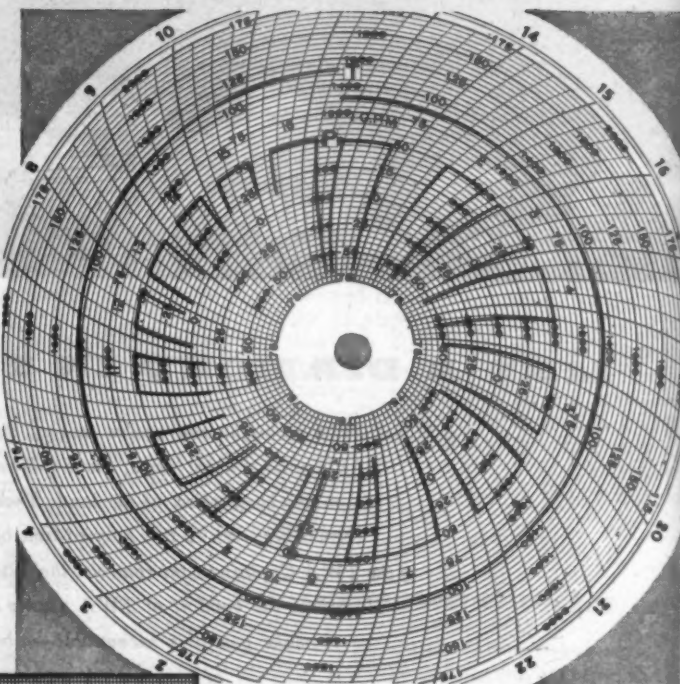
The exceptionally accurate pressure regulation of the Vickers Aircraft Relief Valve shown here over a volume range of $2\frac{2}{3}$ times its rating is demonstrated by the test results illustrated at the right.

This valve was set for 1000 psi at its rated capacity of 6 gpm; the actual pressure was then determined at flow rates from 1 to 16 gpm. At a flow rate of 1 gpm the pressure was 995 psi and at 16 gpm the pressure was only 1030 psi . . . an increase of only 35 psi.

This ability to handle a volume much in excess of its rated capacity means that a smaller size Vickers Relief Valve can be used with a resultant saving in weight and space. These valves are available in four sizes having rated capacities of 1.2, 3.5, 6.0 (size illustrated) and 16 gpm. Without parts change, all valves have operating pressure ranges from 300 to 2100 psi; adjustment is easy. By "venting" they can be used to unload the pump in certain hydraulic circuits. These valves conform to AN specifications; they comply with AN-6200 envelope and with Winterization requirements of Army Air Forces.

VICKERS Incorporated

1482 OAKMAN BLVD., DETROIT 32, MICH.
ENGINEERS AND BUILDERS OF OIL HYDRAULIC
EQUIPMENT SINCE 1921



↑ Chart showing automatically recorded results of pressure and flow test made upon Vickers Relief Valve having setting of 1000 psi at its normal rated capacity of 6 gpm. Time is in minutes. Code: "T" is temperature and "P" is pressure.

← Data recorded on chart above plotted on rectangular coordinates to permit more easy evaluation. Note that pressure varies only from 995 to 1030 psi when flow rate is increased from 1 to 16 gpm.

PER ARDUA. THE RISE OF BRITISH AIR POWER 1911-1939. By Hilary St. George Saunders. Oxford University Press, New York. Illustrated. 355 pp. Indexed. \$3.75.

The book takes its title from the motto of the Royal Air Force, "Per Ardua ad Astra," which, the author says, could be translated "The steep way to the stars."

Mr. Saunders has written a history of the Royal Flying Corps and the Royal Naval Air Service, which laid the foundations of Britain's air power. It brings the story up to the historic year of 1939 and the author is planning to publish later a companion book to carry on the story to the end of the present war.

Although not an official history, the author has had access to many official documents and much official information. It is well illustrated. Names famous in British air history appear throughout. It is a detailed and careful historical review of British military aviation from the earliest days and, as such, is a worthy addition to the current aeronautical bookshelf.

INDUSTRIAL PLASTICS. By Herbert R. Simonds. 396 pp. \$5.00. Pitman Publishing Corp., New York.

This third revised and enlarged edition of Author Simonds' book has been brought up to date to include three new materials and many important new developments and manufacturing processes. The foreign practice chapters have been expanded to cover all countries in the world now utilizing plastics, with special emphasis on South America. Tables, statistics and charts dealing with the chemistry of plastics have been revised in the light of latest research data.

DYNAMIC METEOROLOGY. By Jorgen Holmboe, George E. Forsythe and William Gustin. 378 pp. \$4.50. John Wiley & Sons, Inc., New York.

This book, according to the authors, is intended primarily as a basic textbook in theoretical meteorology for students preparing for a professional career in meteorology, but may prove of some value to students of aerodynamics and similar applied sciences. The authors are members of the Department of Meteorology at the University of California at Los Angeles. The aim of the book is to provide theoretical background for the understanding of the physical behavior of the atmosphere and its motions, and only material which is considered indispensable for the practical meteorologist and weather forecaster is included. The text is self-contained, but presupposes some general knowledge of physics and calculus. Starting from the fundamental concepts of physics, it develops the thermodynamical and hydrodynamical principles by which atmospheric phenomena and the evolution of weather may be explained.

THE AIRCRAFT YEAR BOOK FOR 1945. Edited by Howard Mingos. Lancelot Publishers Inc., 10 Rockefeller Plaza, New York 20, N. Y. Illustrated and indexed. 668 pp. \$6.00.

This is the 27th annual edition of this standard review and reference book. Considerable emphasis is given in the early chapters of U. S. air power with reviews of Army and Navy developments. Aircraft records, activities of aviation organizations, and new developments in aviation, are given attention. Three-way drawings supplement the many half-tones. There are the usual pages of statistics, not enough and not sufficiently detailed for a reference book of this kind, and a directory of companies in aviation. This year's volume is up to previous standards.

JUSTICE IN TRANSPORTATION. By Arne C. Wiprud. 195 pp. \$2.50. Ziff-Davis Publishing Co., Chicago.

This book, written by the Special Assistant to the Attorney General in the Anti-Trust Division, Department of Justice, warrants special study and consideration because it represents the more or less official opinion of the Department of Justice on the question of monopoly in transportation. The preface is by Thurman Arnold, who formerly headed the Department's Anti-Trust Division. While Wiprud writes in the vein of a prosecutor, his book is well documented with cases in point which tend to prove the adverse effects of monopoly in transportation on the economic welfare of the country. The book is a rather serious indictment of methods used in the financing and operation of the railroads in this country and all through its pages Wiprud refers to the powerful and adverse influence which the banking houses of J. P. Morgan and Co., and Kuhn, Loeb and Co. have had on the railroad transportation history of the country. The airlines too come in for a share of Wiprud's criticism, particularly because of their tie-up with the Railway Express Agency in the handling of air express, and the high rates which have been maintained under this arrangement. Wiprud believes that the provisions in transportation law requiring certificates of convenience and necessity have served the purposes of monopoly because it has made it difficult for new services—rail, bus and air—to come into being. The author does not spare supervisory government agencies when it comes to fixing the blame.

THE SUPERFORTRESS IS BORN. By Thomas Collision. Duell, Sloan & Pearce, New York. 218 pp. \$3.00.

This is the story of the Boeing B-29, an airplane which Author Collision describes as having 94 times the gross weight of a Cub and possessing only 9.4 times the wing area and a landing speed only three and a half times that of a Cub. In short, here is an account of an aviation miracle produced under tremendous odds. It is told from the angle of human endeavor which was invested in the world's largest bomber. The chapter on "Flight Test" sparkles with good writing and tells a both sad and thrilling story of Edmund T. Allen, Boeing's chief test pilot, who gave his life in the development of the B-29. Of a group of five men who saw the mock-up of the B-29 at Boeing-Seattle, one said: "This is the airplane that will make the peace."

EFFECT OF FEDERAL TAXES ON GROWING ENTERPRISES. Published by Division of Research, Graduate School of Business Administration, Harvard University, Soldiers Field, Boston 63, Mass. Paper cover. 34 pp. 50 cents.

J. Keith Butters and John Lintner report on the Lithomat Corporation in their Study No. 3 of the effect of federal taxes on new companies. A useful analysis with more than one parallel in the relatively young aviation industry.

WINGS AND THE WEATHER. By A. L. Chapman, Raymond Fletcher and C. C. Macey. Pitman Publishing Corp., New York. 188 pp. This work is designed to aid both students and teachers of meteorology in the mastery of the essential subject matter and the practical application of the facts learned to the science of aeronautics. It is essentially a study guide, embellished with a series of discussion questions which are designed to develop a definite subject matter

mastery in a logical sequence and which, at the same time, will make the student conscious of the benefits that may accrue to him from a practical application of the facts learned.

THE COMING AGE OF ROCKET POWER. By G. Edward Pendray. \$3.50. 244 pp. Harper & Brothers, New York.

In this book the author, an authority in the field and co-designer with other members of the American Rocket Society of one of the first liquid fuel rockets ever shot in this country, traces the evolution of the rocket principle from its discovery in China centuries ago to such modern wartime developments as the robot bomb, bazooka and jet propelled plane. The book is written in a straightforward, handbook style, easily understandable to the layman, and gives not only a general description of rockets, but in addition takes up such problems as the nature of rocket fuel and the significance of the turbo-jet engine as related to the structure of the rocket.

Congratulations

To the Editor:

Please accept our congratulations on this the anniversary of your eight years of genuine service to the aviation industry.

Even though we are way down here below the deep South, we feel that American Aviation keeps us very closely in contact with the happenings of the industry.

You have been and are rendering a real service to the aviation industry and the American public.

Just keep it up!

MACDONALD BRYAN,
Director Public Information,
National Airlines, Inc.

'Independent Voice'

To the Editor:

Even Mrs. Bell's sullen expression will not force me to yield from a program of anniversaryless anniversaries during wartime.

However, I must deviate momentarily from this resolute stand to toss a whole passel of posies to you and those hard-working cohorts who've done such a noble job in fashioning a publication that has performed so meritoriously.

I don't say this because American Aviation and the Daily help us fill our scrap books, but because I genuinely, sincerely, wholeheartedly believe in the need for a strong and independent voice for aviation. You've provided that voice, which has been heard and heeded. May the years ahead give it more power.

J. RAYMOND BELL,
Director of Public Relations,
Pennsylvania-Central Airlines Corp.

(Many of these booklets may be obtained from American Aviation Book and Periodical Dept., Americana Bldg., Washington 4, D. C.)

Simmonds Aerocessories, Inc., has published a new, revised edition of its Handbook of Engineering Design Data on Simmonds Precision-Built Push-Pull Controls. The illustrated handbook includes data summarizing exhaustive tests conducted under the auspices of the Army Air Forces and of the Navy.

Bell Aircraft Corp. has issued a new illustrated booklet entitled "The Bell Helicopter" which is designed to explain what Bell thinks

about the helicopter, and to straighten out some of the misconceptions now current concerning helicopters and their potential uses.

Footo Bros. Gear & Machine Corp. has just published a new product engineering bulletin on "Aircraft Quality Gears." The 66-page booklet presents complete engineering data, comparative performance curves, design details, operating speeds and other information on this new type of gearing.

Stinson Division, Consolidated Vultee Aircraft Corp., Wayne, Mich., has prepared a new illustrated service and instruction manual for the Stinson Voyager, Series 10-A.

Pesco Products Co., 11610 Euclid Ave., Cleveland 6, Ohio, has a new leaflet available on Pesco Aircraft Products. It is designated as Aircraft Products Leaflet No. 8.

Johns-Manville, New York City, has issued a new 12-page booklet entitled "Johns-Manville Products for the Aviation Industry." It provides information on asbestos materials for packings, gaskets and seals, tubings and textiles, friction materials, insulations, sound-deadening materials and other products, including technical data and weight factors.

B. F. Goodrich Co. has issued a new 40-page Rivnut Data book which includes not only an illustrated description of the Rivnut and its general applications but also much specific information on types, sizes and installation procedures, and 10 pages of detailed data on tests.

Railway Express Agency has released some useful information on Air Express in a booklet entitled "The Plane and Pencil Trip of J. Orville Blipp."

An illustrated booklet in Spanish on air line maintenance has been prepared as a

service manual by Truco Products, Inc., of Los Angeles for Latin American airline operators and maintenance engineers and American aircraft manufacturers supplying and servicing the Latin American market. The material which covers modern chemical methods for exterior airplane maintenance, interior airplane maintenance, engine overhaul, corrosion prevention, plating operations and airport maintenance was worked out in cooperation with major air lines in the U. S., Mexico, Central and South America and aircraft manufacturers in the U. S.

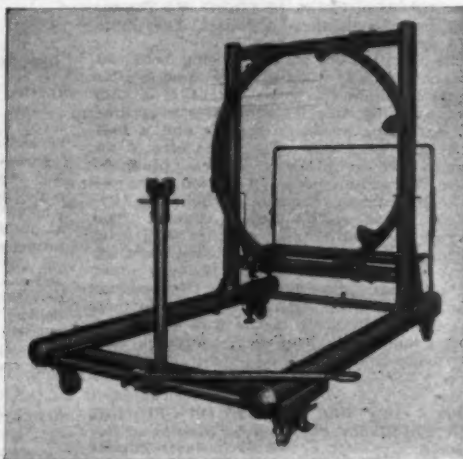
Charles W. Hoyt Co., 551 Fifth Ave., New York 17, N. Y., in cooperation with the New England Council, Boston, has issued a survey of travel and recreation (1944-45) which is described as a "conscientious attempt to discover what people think about travel and vacation in general. Air transportation is treated on a basis equal with rail, bus, steamship and the private motor car. One section is devoted to airline travel.

Fairchild Camera & Instrument Corp. has issued a detailed report on the "Fairchild Maintenance and Training Program for Army and Navy Personnel."

B-W Superchargers, Inc. has published a booklet entitled "Supercharging for Greater Power and Improved Performance." The 20-page illustrated brochure deals primarily with non-aeronautical supercharger applications.

Railway Express Agency, 230 Park Ave., New York 17, N. Y., has issued a brochure entitled "Postwar Town, U. S. A." illustrating typical uses of air express service in postwar communities. Copies of the booklet, which contains an air express map and schedule, can be obtained from the Department of Public Relations.

The WHITING B-29 NACELLE ASSEMBLY UNIT



Here is a new assembly stand, specially developed for B-29 power plant assembly operations. For use both by manufacturers in assembly lines as well as in maintenance operations, the new unit is available in a number of modified forms. The rotatable

engine support and an adjustable work platform make all parts of the nacelle build-up easily accessible. Simplified, easily maneuverable, the B-29 Stand is another time- and trouble-saving unit in the Whiting line of matched handling equipment.

Main Office and Plant: 15647 Lathrop Ave., Harvey, Ill. Western Office: 1151 S. Broadway, Los Angeles 15, Calif. Canadian Subsidiary: Whiting Corporation (Canada), Ltd., Toronto, Ontario. Branch Offices in New York, Chicago, Buffalo, Birmingham, Pittsburgh, Detroit, Cincinnati, St. Louis, and Washington, D. C.

WHITING

CORPORATION



Aviation
Division

Wings of Yesterday

Twenty-five Years Ago

A Navy F-5-L squadron completed a 13,000 mile cruise with the Atlantic fleet, through West Indies waters. (June 28, 1920)

An Aeromarine "Navy Cruiser" made a night flight from Atlantic City, N. J. to New York City, carrying 14 passengers. (June 30, 1920)

A Curtiss "Seagull" made an 1,100 mile demonstration flight to the principal islands in the Philippines, carrying mail, passengers and merchandise. (July 1, 1920)

Wright Aeronautical Corp. of Paterson, N. J. produced for the Army Air Service a cannon motor. One and one-half inch shells are fired through the propeller shaft while the plane is in flight. (July 1, 1920)

Mr. and Mrs. Robert Ireland of Cleveland, Ohio, made an aerial tour of the Atlantic Coast in a Curtiss H.S.2-L. The pilot was C. L. Webster of the American Transoceanic Co. The tour included Bermuda, Savannah, Cuba, Palm Beach, New York, and Bar Harbor, Me. (July 1, 1920)

Attorney A. B. Reynolds of Sacramento, Calif., flew from that city to Los Angeles, Calif. and back in one day, to obtain testimony of a witness in Los Angeles. (July 2, 1920)

Two hundred pounds of grapefruit reached New York City from Miami, Fla. in the hulls of two big flying boats of Aero Ltd. (July 2, 1920)

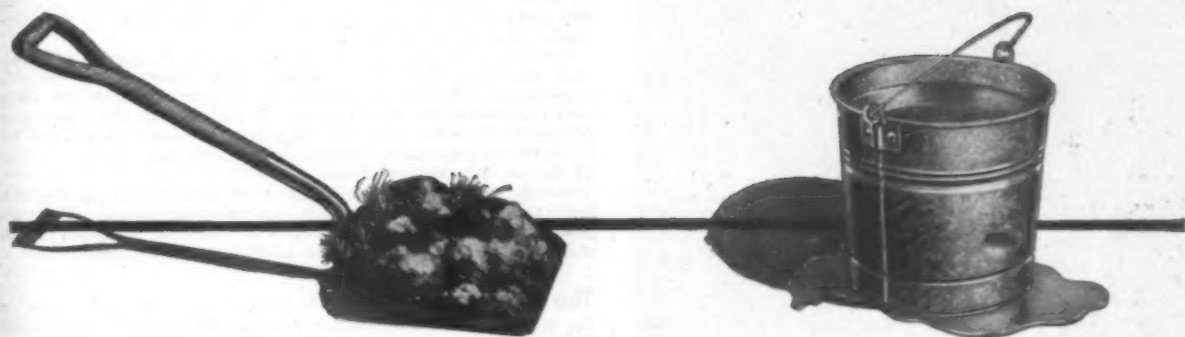
Fifteen Years Ago

Amelia Earhart, in a Lockheed Vega, Pratt & Whitney Wasp motored, set a speed record for women of 181.18 mph. over a 3 kilometer course. (July 6, 1930)

The Pacific Coast Aeronautical Exposition was being held in Oakland, Calif. (June 28-July 6, 1930)

Roger Q. Williams, with Capt. Errol Boyd and Lt. H. P. Connor, flew from New York to Bermuda and return, without stop, in 17 hours and 1 minute (Bellanca, Wright motored) (June 28, 1930)

Major Charles Kingsford-Smith, in a Southern Cross, flew from New York to Oakland, Calif., completing a world flight begun May 31, 1928. (July 2-4, 1930)



Startlingly Simple, Isn't It?

A shovelful of earth . . . or a continent!

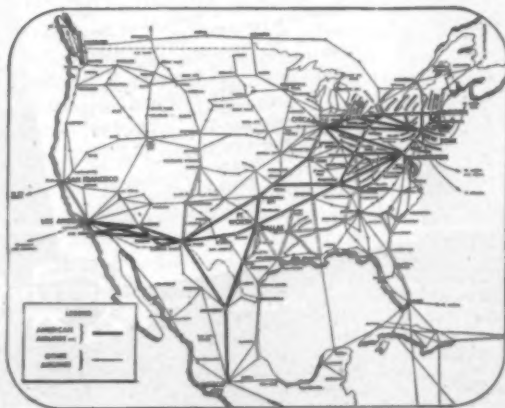
A bucketful of water . . . or an ocean!

The transport plane travels above each of them with equal ease.

Both land power and sea power are important. Now, however, air power determines their effectiveness.

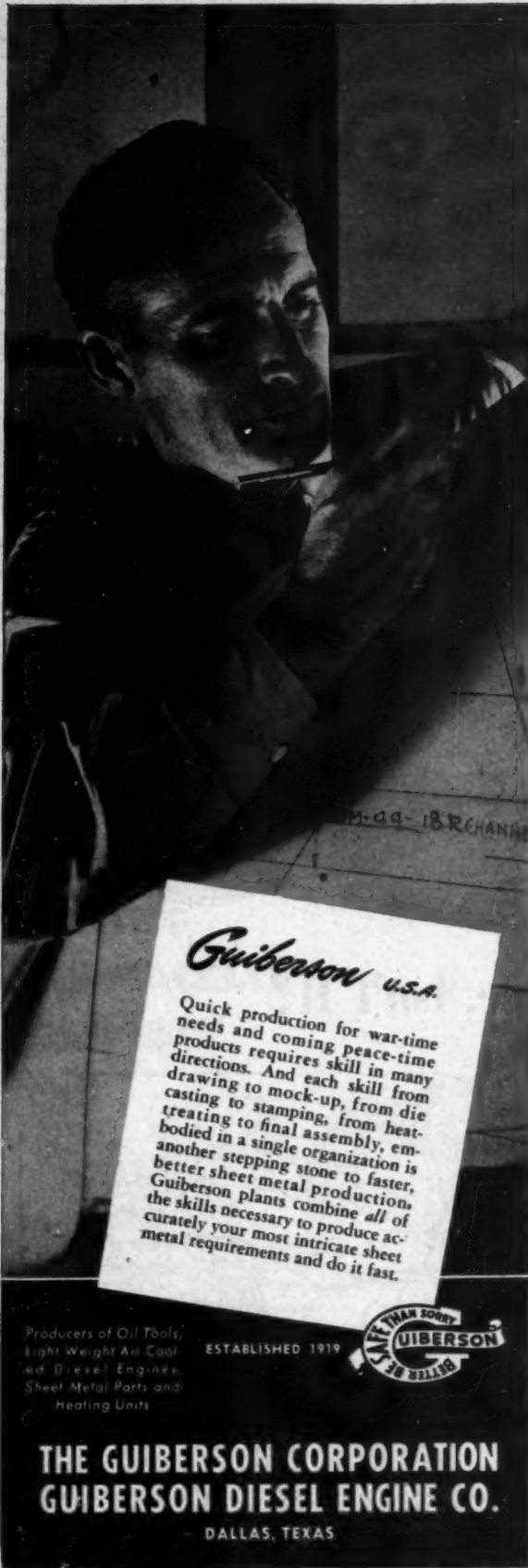
This is just as true for industry, trade and commerce as it is for war.

The United States must expand its air transportation prowess. Otherwise, we cannot compete in business or combat aggressors.



AMERICAN AIRLINES *Inc.*

THE NATIONAL AND INTERNATIONAL ROUTE OF THE FLAGSHIPS



Guiberson U.S.A.

Quick production for war-time needs and coming peace-time products requires skill in many directions. And each skill from drawing to mock-up, from die casting to stamping, from heat-treating to final assembly, embodied in a single organization is another stepping stone to faster, better sheet metal production. Guiberson plants combine all of the skills necessary to produce accurately your most intricate sheet metal requirements and do it fast.

Producers of Oil Tools,
Light Weight Air Cool
ed Diesel Engines,
Sheet Metal Parts and
Heating Units

ESTABLISHED 1919

THE GUIBERSON CORPORATION
GUIBERSON DIESEL ENGINE CO.
DALLAS, TEXAS

GUIBERSON
BETTER THAN SORRY
LATE THAN SORRY

Trend of

(As compiled and edited by Clifford Guest,

Fixed Price Contracts: The campaign of the Government procurement agencies to put all aircraft contracts on a fixed price basis is continuing unrelentingly—and it appears certain that eventually practically all will be on that basis.

Originally, approximately 80% of all cost-plus-fixed-fee contracts were in the aircraft industry. In turn, 80% of the aircraft contracts were CPFF early this year.

Last spring the policy of letting no new CPFF contracts was adopted and a program was begun to try to convert as many of the existing contracts as possible. June 30 was set as the deadline for conversion, but resistance from some companies plus the innumerable details involved has prevented reaching that goal. The present percentage of CPFF contracts is not known, but it is believed to be well below the 80% figure at the beginning of the year.

Experimental work will not be included in the fixed price schedule. Consensus in the industry is that the contract conversion program is far from being concluded.

Airline Pilots—Gains and Losses: It is now certain that all Army reservists in the operating personnel of the airlines will go into U. S. uniforms this year, regardless of the particular jobs they are doing.

Realization of this fact at first struck the airlines as a bomb-shell, but they are not so worried now because the Army is cooperating 100% in helping fill the pilot ranks with top flight men returned from the Services. A majority of the pilots thus being returned are from the Eighth Air Force. Maj. Gen. Ira C. Eaker is personally interested in channeling those who can be spared into airline work.

Airline men say that the caliber of these returning flyers is high and that after transitional or refresher training they are proving highly adaptable to airline routes. Air Transport Command, of course, is holding on to its transport pilots.

The Government Listens: Nine major simplifications of the civil air regulations which go into effect July 1 are a splendid indication of the cooperative spirit the aviation industry is now finding in the Government agencies—particularly with such men as T. P. Wright, CAA Administrator, and William A. M. Burden, Assistant Secretary of Commerce for Air, and lesser officials in their departments.

Simplification or elimination of restrictions, once imposed, come about slowly. But CAA has made a good start. And what's important, no one questions its sincerity. The willingness of Wright, Burden and others to listen to the ideas of the flyers and industry men in the field is in sharp contrast to the stone wall treatment which CAA used to accord its "subjects."

Happy Landings: Current tests in connection with the steady development of instrument landing techniques being made by CAA at Indianapolis are significant, and the airlines are going to hear much along this line in the future.

While no landings are made at most airports under a 500-foot ceiling, Air Transport Command has successfully conducted tests at 50 feet at busy terminals.

If the airlines are going to do the mass transportation job they expect to do, landings will have to be made regularly with 50 foot ceilings. CAA is stepping up its instrument landing program, and the carriers have a lot at stake.

Price Ceilings on Planes: Complete exemption of aircraft from price control is being urged upon the Office of Price Administration by the aircraft industry on the grounds that the price control act never was designed to apply to such civilian items as aircraft. However, stormy waters are ahead, and a lot of red tape and paper work which might involve items down to the smallest components, appear to be in the making.

Government officials are reported to be sympathetic to the plea of aircraft makers, but fear that opening the door to price exemption will bring a flood of similar demands from other sources. It's one of the big reconversion problems currently being discussed by the manufacturers.

The News

Managing Editor, American Aviation Daily)

The Councils Continue: For months some segments of the industry have advocated abolition of the Aircraft War Production Councils, and rumor and predictions have been rife. The issue now seems definitely settled with action by the presidents of the aircraft manufacturing companies in agreeing to continue the Council activities on the basis that urgency of aircraft production is still such as to preclude any early discontinuance of the Council work.

For the next three months Robert E. Gross, president of Lockheed, serves as president of the National Council and the West Coast Council. Guy W. Vaughan, president of Curtiss-Wright, is vice-president of NAWPC and the East Coast Council.

Avco Expansion May Continue: In connection with Aviation Corporation's purchase of control of Crosley Corp., giving it wide ramifications in the home appliance and consumer goods field as well as entry into radio broadcasting, is not the last you will hear of Avco's expansion plans.

Some of the corporation's early moves may involve Consolidated-Vultee Aircraft Corp. in which Avco has a substantial interest. Watch, also for some developments in the steel field.

Byrnes Drafting Service Consolidation: President Truman has assigned the task of drafting a recommendation to Congress for a Single Department of National Defense to James F. Byrnes, former director of War Mobilization and Reconversion, one highly-placed source has intimated. It is understood that Byrnes has been working on the consolidation of the Army and Navy for several months and that plans are "all set." President Truman has been in favor of this move for several years. General Eisenhower's speech at West Point advocating a single unit has stirred some interest on the part of the general public.

New Lightplanes Soon: Lightplane manufacturers will begin delivering new personal airplanes to consumers in July and over 25,000 are expected to be delivered during the first full year of postwar production, according to a roundup of company figures compiled by *Southern Flight*.

Companies not yet ready to quote figures included Engineering & Research (Ercoupe), Beech, Cessna, Luscombe, General Aircraft (Skyfarer), and others. Company figures from seven firms are:

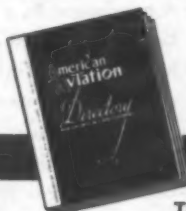
Company	Consumer Deliveries	First Year's Production
Piper	July	5,200
Aeronca	Fall	4,000-5,000
Republic	Spring	4,000-5,000
Culver	Unknown	3,600
Taylorcraft ...	September	3,000
Globe	By End of Year	1,500
Stinson	March	1,000-1,200
Total		22,300-24,500

Capsule Observations: Congress will soon get a report from the War Department containing its recommendations for a peacetime Air Force. . . . There is every indication that it will be pleasing to the industry. . . . Army officials say they could end procurement of combat items abruptly in event Japan should surrender suddenly, making 90% of the terminations effective in 48 hours. . . . Damage from Japanese suicide planes is a serious proposition. . . . However, Jap suicide plane attacks on Superfortresses have not been as effective as against battleships and destroyers. . . . One B-29 came home after absorbing two suicide plane attacks and another one which failed to return sustained five before going down. . . . Maj. Gen. Curtis E. LeMay, chief of the 21st Bomber Command, says Japs have employed jet-propelled suicide planes launched from larger planes against B-29s.



The AVIATION INDUSTRY at your Finger-tips

11th Edition • Just Off The Press
Over 12,000 Names—2,000 Companies



The NAMES, ADDRESSES, PHONE NUMBERS, PRODUCTS and ACTIVITIES of over 12,000 aviation executives and more than 2,000 companies and organizations.

The ONLY COMPLETE Aviation Directory

Presidents, Vice-Presidents, Treasurers, Secretaries, Boards of Directors, Sales Managers, Advertising Managers, Purchasing Agents, Plant Managers, District Managers, Traffic Managers, etc.—THE KEY MEN—they're all here in the new AMERICAN AVIATION DIRECTORY.

. . . PLUS U. S. and Foreign government aviation groups, airlines throughout the world—and accessory and equipment product guide—completely indexed and cross-indexed.

Published Twice a Year Current Edition \$5.00
Subscription (Two Editions) \$7.50

American Aviation Publications
WAYNE W. PARRISH,
Editor and Publisher

AMERICAN BUILDING

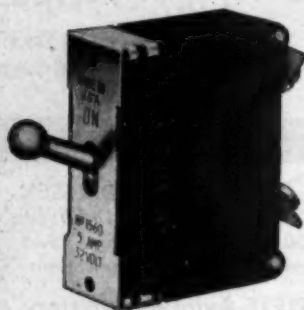
WASHINGTON 4, D. C.

First in Circuit Protection

LITTELFUSE

Snap! make...Snap! break

CIRCUIT BREAKER SWITCHES



A product with a military reputation, pioneered and developed by Littelfuse. High lag, quick reset feature adapts it to many commercial uses. It's "finger trigger" principle, with high spring compression, gives it instantaneous action and maximum contact. Its magnetic blow out minimizes the arc—which reduces pitting in the switching action assuring longer breaker life.

These non-trip free, circuit breaker switches come in either a push pull button (series 802000) or toggle control (series 801000—illustrated)—in 5 to 50 amp ratings at 32 volts or less DC or AC. Conform to specification AN-C-77a. Bi-metal design, assures little variation in use at temperatures as low as 60° below F. and (5 amp. breaker—without electrical load) takes 350° F. without opening.

Send for descriptive literature to Littelfuse Incorporated,
4757 N. Ravenswood, Chicago 40, Ill.

Plants in Chicago and
El Monte, California

QUALITY IS BASIC

Today, our business continues to expand as satisfied customers voluntarily recommend our fuses to the manufacturers of airplanes, automobiles, radios and electronics equipment... and to the utilities and building industries, as well. The reputation which we won prior to the war, gave us the opportunity to design circuit protection devices for the Army, Navy and Air Forces. Early in the war, we were awarded the Army and Navy "E".

Throughout the years of progress, never have we lost sight of the basic fundamental on which our business was founded, namely: a quality of workmanship and materials which makes for precision in circuit protection and safety.

W. J. Smith
President

LITTELFUSE

Incorporated

Established
June 1, 1937

American Aviation

Net Paid
10,993
This Issue

Industry Generally Favors Revised Air Rules

Pressure Exists for Still Further Simplification; Responsibility for Enforcement Rests on Operators

SIMPLIFIED civil air regulations governing private flying, the bulk of which became effective July 1, have been received with general favor by the industry, but strong pressure exists for still greater relaxation of the rules.

This was the general consensus garnered by *American Aviation* in a cross-section survey of representative spokesmen of the several phases of the industry.

It was generally conceded from these sources that the responsibility for enforcement now rests with the industry itself, and that it must do an adequate policing job to make the new regulations work.

Pressure for additional changes manifest itself June 19, when the Civil Aeronautics Board announced that the effective date for new Part 60 of the CAR, governing air traffic rules, would not become effective until Aug. 1. It was to have been effective July 1.

The CAB said the postponement came as a result of requests from the military services and the airlines. They asked reconsideration of the 1500-foot minimum altitude for instrument flights. The Board acceded to the request on the grounds that this particular provision had not been circulated for comment by the industry prior to its adoption.

AOPA Hits Weather Minimums

Aircraft Owners and Pilots Ass'n, characterized Part 60 as "a compromise between what non-scheduled flyers desire to have in the way of simplified regulations and what the CAA desires to retain." It voiced criticism of the weather minimum phases of the regulation as being "unnecessarily complicated by introduction of too many variables."

"In particular," said AOPA, "the visibility and proximity to cloud requirements under contact flight rule conditions appear to us to be far more restrictive and confusing than necessary by creating three different categories: (1) inside airport traffic zones, (2) outside airport traffic zones but inside control areas, and (3) elsewhere."

"The average pilot is bound to be hopelessly confused. AOPA desires to see the one-mile visibility rule adopted universally and the three-mile rule forgotten. This would remove at least half of the variable rules which a pilot is now expected to memorize and apply in flight under various conditions."

"Outside of the confusion created in connection with weather minimums, that portion of the new regulations which applies to contact flight rules appears to be an improvement over the old regulations."

The CAB's announcement of the postponement of the effective date of Part 60

emphasized that the old regulations would remain in effect until revisions in the new part have been completed and make effective. The regulations effective July 1 are Parts 20 and 43, governing pilots' certificates and general operations rules.

With respect to the latter regulations, AOPA said that they appeared to be in better shape than Part 60, "but have minor points which are greatly in need of clarification."

"It is our feeling that the new regulations will result in a big increase in flying but that continued pressure is necessary to bring about the ultimate objective of simplified regulations, the attaining of which will remove a major annoyance and detriment to postwar aviation growth."

Following are other comments on the new regulations which came in response to the survey:

Beverly Howard, president, Hawthorne Flying Service, Orangeburg, S. C.: The new regulations are a "big step" in the right direction and will unshackle a part of the industry which has been strangled by regulation instead of promoted. CAA administration will play a large part in whether the simplified rules will do any good. If CAA inspectors maintain the attitude of policemen, the simplification goes for naught. A minimum few safety regulations are required and they should be comparable to those governing auto driver's regulations.

Col. Roscoe Turner, president, National Aviation Trades Association: NATA members regard the simplification as accomplishing one of our primary objectives. By relaxing rules, which, in the past, have caused many prospective pilots to turn away from flying, CAA now persuades them in the other direction. The operators and flight instructors are made the custodians of flying safety. Under these new rules, we operators must guard against inadequate flight instruction before sending a student up for his "ticket", and at our airports we must restrain pilots inclined to recklessness.

Oliver L. Parks, president, Parks Air College: I have advocated for the past 10 years liberalization and simplification of these regulations and predict that as a result of these changes thousands and thousands of people will take to the air who have never flown or thought they would ever fly. I maintain that self preservation is the first law of nature, and the accident rate will not increase as a result of these changes. We have seen so many advances as a result of the present conflict that even the new regulations that will go into effect July 1 will necessarily have to be modified again.

Sheldon B. Steers, president, National Association of State Aviation Officials: I believe the regulations are decided steps in the right direction and will encourage increased use of aircraft for personal transportation. Time will uncover any additional weaknesses and may indicate further changes, therefore, all regulations should be subject to revision at any time, certainly they should not be static. Too often stringent regulations have been a deterrent to the owner who had some-

thing else to do other than run the regulation and requirement gauntlet.

John R. West, Los Angeles, national councillor of NAA: The simplified regulations should be well received, but will not greatly increase private flying because the cost of owning and operating planes is still the biggest hurdle. I personally feel that abolishing of navigation and meteorological training and reduction of weather minimums will increase accidents because too few even now can do satisfactory marginal weather flying and removal of the present superficial training will make the situation worse.

Rudy C. Mueller, Omaha Aircraft Co., and Vic Schroeder, president, Central Aviation Co.: This unquestionably indicates that CAA is willing to cooperate in every possible manner to encourage more people to be pilots and aircraft owners in the private field. It indicates that CAA has every confidence that the fixed base operator and the flying school operator is competent and willing to be the guardian over private flying. Since the pilot no longer needs to pass an exacting flight test by a CAA flight inspector to increase his "rating" of flying various aircraft, the new regulations qualifying a pilot by checkout by any certificated pilot with proper safety operating record, should accordingly restrict such pilot to be given type (make and horsepower) so checked out on, and not permit such checkout to count for horsepower 50% over or under. Prior to receiving a private pilot's license a requirement of competence in aeronautical chart reading, whether sequence and synoptic charts should be included for examination, oral or written.

Max Karant, managing editor, Flying: The new regulations are a long step forward and should do much to put many more people in the air. Because they have been cut down so much and are so broad and general, it is my opinion that the regulations give CAA enforcement personnel a great deal more latitude in defining what they consider too unsafe operations. There are a few small things that I might be curious about, such as the greatly relaxed requirement that now permits the owner of a private plane to let his airplane go for a whole year without being inspected. I would be inclined to say that some form of periodic check should be required.

Dexter C. Martin, director, South Carolina Aeronautics Commission: The change in regulations reflects a thorough study and complete understanding of the problems that have plagued the development of private flying for the past decade, and at the same time offers an opportunity for civil aviation to destroy itself. It is felt that relaxing of the requirement of a minimum of eight hours dual flight instruction before solo, would bring about or rather permit a situation to prevail which would not be wholesome. A competitive spirit between operators and between flight instructors to solo students in 7 hours, 5 hours, 3 hours or less will surely develop, and the competition will directly affect the quality of instructions and type of operation. The opportunity certainly exists for an ambitious operator to advertise a solo course whereby he would solo the student in less time than his competitor, and thereby create the false impression that he was conducting the most efficient flight operation. Our operators have indicated they will observe the custom of requiring 8 hours dual instruction before solo.

ATC Overseas Cargo - Handling Offers

IN THE critical period before V-E day, the North Atlantic Division of the Air Transport Command was flying more than 3,000,000 lbs. of mail, cargo and passengers a month in each direction across the North Atlantic. Behind this accomplishment lies a story of meticulous planning with a minimum of equipment and personnel that may well serve as a pattern for postwar commercial operators.

Typical of the NAD cargo operations is that at La Guardia Field, New York. Cargo for shipment through La Guardia is first brought to Newark by air and surface lines, and at Newark it is repacked if necessary for air shipment, and then forwarded to La Guardia by trailer truck, where it passes into the control of the Priorities and Traffic Division, which has jurisdiction over all freight loading, and works closely with Operations.

The entire La Guardia operation is keyed to a schedule, with Eastbound ships allowed a one hour and Westbound a two hour ground time before taking off again. The ramp officer sees that they get out on time, practically working with a stop watch, and if there is as much as a two second delay, it's part of his job to investigate and fix the responsibility.

Operations starts off by getting the set up on the aircraft, with the weight and balance officer checking the basic operating weight for that particular ship and the amount of fuel needed in accordance with the en route weather conditions, and figuring from this the allowable lift load. This is then turned over to Priorities and Traffic, which "pulls the load."

This consists first of picking the load from card files giving complete information as to weight, size, priority and destination for each item, and then of actually pulling the load from the waiting cargo on the floor and setting it up on

pallets according to channels. Chalked on the hangar floor in front of each row of pallets is the destination, plane number and other instructions such as first four pallets to be offloaded at Bermuda. It then refers back to Weight and Balance which "cases the load," figures the balance with a Cox & Stevens computer, and makes out a form indicating the distribution by cubic measurement and weight.

Air freight now takes over and loads the aircraft. If the load won't fit, it is re-computed by Weight and Balance, but this is a rare occurrence because of the careful pre-planning and paper work. Next the load is tied down and inspected. One important point to check is that floor loading are not exceeded with high density freight, and at time special platforms are built to distribute the floor load. Then the pilot reports, inspects the load, and if it looks safe, accepts it and signs what is known as Form F. While he is signing, passengers and baggage are loaded, and the ship is ready to leave.

Use Chisel Trucks

The actual movement and loading of the cargo at La Guardia Field is performed almost entirely with versatile fork or chisel trucks. As ATC officers point out, these chisel trucks can be used to handle all sizes of cargo, since the smaller items can be stacked on pallets, and the whole pallet picked up by the truck. In general practice, one or more of these trucks transfers the cargo from the hangar strips and lines it up beside the plane, while other trucks of the same type perform the actual loading, lifting the pallets up to the cargo hatches.

While present methods are extremely efficient, ATC technicians are now working on a light weight pallet for small items, which could be loaded and packed on the hangar floor, and then placed

aboard the plane as a unit. Such a pallet will probably be provided with casters to facilitate moving it about within the plane, and shifting cargo to adjust balance after off or on-loading.

According to ATC officers, the major prerequisite to ground time efficiency is trained personnel, and particular attention has been paid to this phase of the operation. Each individual is trained for one particular task, but at the same time has to be able to lap over into the next man's. For example, the man who does the loading has to know computation and what it means. This same efficiency is maintained in the paper work with 30 girls and no military personnel except for officers handling all the La Guardia cargo paper work for a 24 hour a day operation.

One of the major problems of the NAD is off-loading. Some of this can be planned, but there are cases where a sudden turn in the weather requires off-loading of a thousand or more pounds of cargo at Bermuda or some other ocean stop. From the actual handling standpoint this is discounted in advance as much as possible by loading the lower priority items in the most accessible points, and planning weight so that the extra fuel will be added in the right tanks to offset the off-loaded cargo as far as balance is concerned. The off-loaded cargo is then on-loaded on a following aircraft where favorable wind conditions permit a greater load for the following leg of the flight.

ATC officers emphasize the importance of advance loads, and leave one with the impression that no postwar commercial over ocean operation can hope to run at profitable load factors, unless some provision is made for keeping advance loads on hand at all times.

Commercially Unsalable Surplus Aircraft To be Salvaged and Scrapped, Says SPB

ALL commercially unsalable surplus aircraft, including the vast majority of surplus combat planes, other than those required for educational uses, research and a few special purposes, will be promptly salvaged and scrapped, Surplus Property Board announces in Special Order No. 11. All planes which are unsalable according to Reconstruction Finance Corp. will be flown by the Army and Navy to RFC fields for salvage and scrapping, while those in non-flyable condition will be scrapped by the services.

A special committee, under the chairmanship of Paul H. Bonner, assistant director of the Aviation Division of SPB, has been formed to study all aspects of aircraft salvage and scrap. Composed of representatives of Army, Navy, RFC and WPB it will investigate the most economical and efficient methods of reducing surplus aircraft to usable metal, largely aluminum. The committee will consult with the National Academy of Sciences and Battelle Memorial Institute, selected by the academy to study the metallurgical

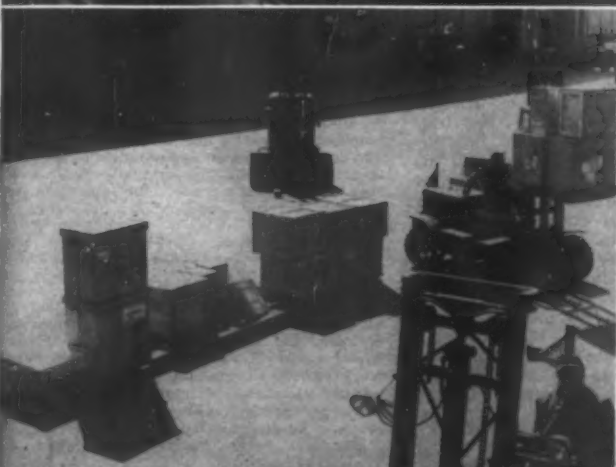
aspects of aircraft scrap and with an industry advisory committee representing aluminum production, fabrication, foundry and smelting industries.

War weary or obsolete planes are being declared surplus at the rate of more than 100 a week and already more than 4000 surplus fighters and bombers are stored in RFC fields, SPB stated. The prompt salvaging and scrapping of these planes "will result in the minimum transportation and handling expense to the Government and a substantial return from the sale of resulting aluminum. The increasing flow of surplus combat aircraft will mean a far larger supply of aluminum for the civilian market than has ever been known in this or any other country," it was stated.

SPB anticipates that careful preparation and smelting will produce a secondary metal satisfactory for both wrought and cast products such as prefabricated housing, kitchenware, roofing, fencing and many household articles. In addition the price should be substantially lower than alloys of virgin metal.

(Top Left) Cargo awaiting flights is stored under signs indicating eventual destination at the ATC hangar, La Guardia Field, New York. (Top Right) Pulled from the storage stacks, each planeload of cargo is arranged on pallets according to assignment areas and loading sequence. The final destination of the aircraft, its number and intermediate off-loading points are chalked on the floor in front of the pallets. Cargo in this strip will be placed aboard ship no. 7469 bound for Prestwick (PWX) with the first four pallets to be removed at Goose Bay, Labrador. (Center Left) Fork trucks pick up the pallets from the hangar strip and line them up in the same order beside the aircraft. (Center Right) Another lift truck loads the big C-54 while the first trucks are still transferring pallets from the hangar strip. (Bottom Left) Trained cargo handlers stow the cargo inside the fuselage. Note how the tie-down equipment is neatly arranged on either side. This is done immediately the aircraft is unloaded so that it will be ready for immediate reloading. (Bottom Center) The cargo is tied down and secured against shifting in flight with ropes and Evans tie-down rods, standard equipment on all ATC aircraft. (Bottom Right) All tied down and ready to go, this cargo has been placed in proper off-loading order and is secure against shifting even in rough weather.

Pattern for Postwar Commercial Transport



Senate Committee Stalls Again, Postponing Atlantic Decision

Truman May Give Green Light to CAB Regardless

Two Senators who are determined to prevent the Government from going ahead with its announced policy of regulated competition in the international air transport field if they can possibly do so, continued to keep the Senate commerce committee from making a final determination of legislation on the subject as this issue of *American Aviation* went to press.

As a result the Civil Aeronautics Board was still holding up announcement of its route decision on the North Atlantic, a decision which is understood to provide for three air routes across the Atlantic. The proposed carriers are Pan American Airways, American Export Airlines (with acquisition of 51% of stock by American Airlines approved), and Transcontinental & Western Air. One route would continue to Scandinavia from London, another to Cairo through middle Europe from London, and a third to Cairo through the Mediterranean.

Status of the international situation is: The Government is ready to move ahead on its decisions, having obtained approval of the White House, the State, War, Navy, Commerce and Justice Departments, and the CAB.

But the White House had promised Senator Josiah Bailey (D., N. C.), chairman of the Senate Commerce Committee, that no decisions would be made until the Senator's committee had had full opportunity to study and report on pending legislation pertaining to U. S. foreign air policy.

The Senate committee has been studying the matter for over a year. The only bill in question is the All-American Flag Line bill introduced by Senator Pat McCarran (D., Nev.), calling for the establishment of a monopoly "community" company. Extensive hearings were held.

On June 11, the aviation subcommittee of the Senate Commerce Committee met to vote on the McCarran bill. On the motion of Senator McCarran, and supported staunchly by Senator Owen Brewster (R., Me.), the committee voted to give Senator McCarran ten days during which he was to rewrite the bill. Senator Bailey, chairman, was absent in North Carolina.

Ten days later, on June 21, the subcommittee met to hear the new McCarran proposals, which called for the separation of domestic and international air transport, thus intending to prevent any domestic airline from flying internationally.

The subcommittee voted down the amendment, however, by a vote of 6 to 5. Supporting McCarran and Brewster were Senators C. Wayland Brooks (R., Ill.) and Harold H. Burton (R., Ohio), and Senator Brewster voted a proxy from Senator Arthur H. Vandenberg (R., Mich.) who has yet to attend a single hearing on the matter.

Opposing the amendments were Senators Bailey, Theodore Bilbo (D., Miss.), James H. Mead (D., N. Y.), Edward V. Robertson (R., Wyo.), John H. Overton

(D., La.) and Warren G. Magnuson (D., Wash.), the Mead and Magnuson votes being proxies.

Following this test vote, the subcommittee then turned down the McCarran bill as a whole by the vote of 7 to 2, only McCarran and Brewster voting in favor of it.

The following day, June 22, the McCarran bill came up for consideration before the full Senate Commerce Committee. Senators Brewster and McCarran battled for two hours in favor of the McCarran bill, as amended, and finally Senator Bailey postponed the voting until Tuesday, June 26.

The delay was regarded as a victory for Pan American Airways which has vigorously favored a single company policy.

Meantime it was not known whether President Truman would give the green light to the CAB to release the North Atlantic decision regardless of the Senate delay. Since the issue had become drawn somewhat along party lines, there was some feeling that the President would move ahead.

Although the North Atlantic decision was months late, and other countries progressed toward peacetime international airline plans, there was still no reason to believe that the delay in the Senate over determination of policy would alter the final outcome. But delay might be serious in other respects. Even those in favor of the McCarran monopoly proposal did not believe they could obtain a favorable vote if and when the bill could be brought to the floor of the Senate.

[This issue went to press before the outcome of the June 26 action of the Senate Commerce Committee became known.]

Urges One Federal Agency To Regulate All Carriers

Regulation of all types of common carriers should be embraced within one federal agency in order to better keep pace with the needs of the transportation industry, Donald D. Conn, executive vice president of the Transportation Association of America, said last fortnight before the Milwaukee Traffic Club.

He said that Congress should exempt the functions of transportation regulatory agencies from any authorization granted the President to reorganize or streamline the executive branch of government, and warned against government ownership of transportation.

"Government ownership of transportation has been creeping up on this country ever since 1920," he said. "We have been pursuing an archaic national policy that invites it—outmoded principles of regulation that result in vast wastes of both public and private capital and in cycles of bankruptcies that destroy the confidence of private investors; the promotion of one type of transport against another at public expenses . . ."

High School Airport

The only high school in the nation to own its own airport is the Shelby County School of Aeronautics, Whitehaven High School, Memphis, Tenn., it is believed. The landing field and parking space closely adjoins the school buildings.

Proposed Revisions to CAR Being Considered by Board

The Civil Aeronautics Board has under consideration proposed revisions to Parts 40 and 61 of the Civil Air Regulations dealing with pilot route qualifications. The principal proposed amendments are: 1) The responsibility is placed on the company check pilot for certifying the qualifying pilot; 2) Recognition is given to experience by permitting the first pilot with extensive experience to qualify with fewer trips over the route than the pilot with less experience; and 3) The present "adjacent Route" is dispensed with, also the difference in qualifying requirements for regular and alternate routes. Comments on the proposals are requested by July 15.

Deadline Extended for '03' Comments

The CAB has extended until July 9 the deadline for industry comments on the new proposed Part 63 of the CAR covering a revision of airworthiness requirements for non-transport aircraft. The original deadline was July 2. The Board said the extension was granted because duplicating difficulties in Washington had delayed distribution of the proposed regulations.

CAB Releases BOAC Map

The CAB's air transport information division has released a schedule frequency map covering the operations of British Overseas Airways Corp. Frequencies on BOAC's network vary from one-half round trip per week on the Mombasa-Colombo route to 32 round trips per week on the Leuchars-Stockholm sector. Equipment ranges from Boeing and Sunderland flying boats to Liberators and Lockheed Lodestars.

Goodrich Gets Lodestar

B. F. Goodrich Co. has purchased a twin-engine Lockheed Lodestar which will be piloted by Tom L. Kenney, formerly with Lockheed and Boeing and Hume Earnest who has been pilot for Lord Beaverbrook and William Randolph Hearst. The company states it was the first rubber company to own and operate an airplane for transportation and testing of aeronautical products—in 1929.

Goodyear Building Runway

Construction has been started on a 3,000 ft. runway for heavier-than-air craft at Goodyear Aircraft Corporation's Wingfoot Lake airship base. The runway, from east to west, opens up an additional 16 acres of Goodyear owned property at Wingfoot Lake, and will permit landing of the company's planes there, in addition to airships, for major overhaul or other purposes. The runway, which supplements extensive airship landing facilities, will be of sod construction.

John Martin Heads WPB Group

John H. Martin has been appointed chairman of the War Production Board's Production Readjustment Committee, which handles military cutbacks, J. A. Krug, WPB Chairman, announced today. He succeeds J. D. Small, who became WPB chief of staff a short time ago.

India Will Spend 46½ Million on Civil Airlines

By ERIC BRAMLEY

(American Aviation's Executive Editor now serving as an accredited war correspondent in the China-Burma-India theatre)

NEW DELHI—A far-reaching program for the postwar development of India's civil airlines, involving a construction program of \$46,500,000, will get underway as soon as possible after the defeat of Japan, says Sir Frederick Tymms, Director of Civil Aviation in India.

The plan, which late last year was accepted by the Policy Committee on Posts and Aviation, has now been approved by the government.

In an interview with this correspondent, Sir Frederick, an able administrator and the man who represented India at the International Civil Aviation Conference last November, revealed some of the important points of the program.

In the past, Sir Frederick said, there has been no orderly development of civil aviation in India. Although operators generally sought government approval, they were in fact free to start air services wherever and whenever they desired. There was no definite program for encouraging new operations through government subsidies, and it was some time before any of the airlines received assistance.

Government To Move Ahead

Sir Frederick realistically pointed out that there are many things in India that need developing more than civil aviation—it is among "the smallest of the necessary activities." Nevertheless, the government plans to move ahead with what funds are available. Steps in the plan are:

1. First, and most important, the operation of postwar airlines in India will be left to private enterprise. The government may operate a line or take a financial interest therein, but these cases are expected to be few.

2. An Air Transport Licensing Board, already authorized by legislation, will be established. This Board will operate along the lines of the U. S. Civil Aeronautics Board, which Sir Frederick considers "the best model in the world." There will be a rigid control of technical standards, fares will be fixed, companies will submit reports on operating costs and traffic carried. A system of controlled subsidy will be instituted, but the government will not guarantee a profit. This must come through economical and efficient management. Also, it is probable that subsidies will be limited to routes of national importance.

3. The first aim is to establish daily service on 12 main trunk routes, covering 11,000 miles. In this respect, the plan is different from the CAB in that the government will determine convenience and necessity in advance. In the case of secondary routes, operators will submit applications for approval.

4. All first-class mail will not go by air. There will be a surcharge.

5. As provided in the convention signed at the International Civil Aviation Conference, India will provide adequate airports for international services.

6. An extensive training program is being considered—a flying school, an engineering school, a radio school and an aerodrome school.

7. Flying clubs will continue and increase, and aviation will be introduced into the country's educational institutions.

The 12 trunk routes that will be established initially are: (1) Karachi-Bombay-Madras-Colombo, (2) Calcutta-Allahabad-Cawnpore-Delhi-Lahore-Peshawar-Kabul, (3) Delhi-Nagpur-Hyderabad-Madras, (4) Calcutta-Cuttack-Vizagapatnam-Madras-Colombo, (5) Bombay-Nagpur-Calcutta, (6) Bombay-Indore-Bhopal-Lucknow, (7) Bombay-Ahmedabad-Delhi, (8) Karachi-Jodhpur-Delhi, (9) Calcutta-Akyab-Magwe-Rangoon, (10) Calcutta-Dacca-Sylhet-Dinjan, (11) Karachi-Quetta-Lahore, and (12) Madras-Bangalore-Cochin.

Several of these routes are now in operation by Tata Air Lines and Indian National Airways, and Sir Frederick emphasized that there will be room for only a few new companies.

During the war, both Tata and INA have been under the control of the government and the RAF. The government owns practically all airline airplanes, which it obtained on Lend-Lease. The RAF controls all the space. The airlines receive fixed fees for their services, and are able to make a small profit. After the war, however, the lines will again be privately operated.

In the beginning, Sir Frederick sees operations involving 8,000,000 miles of flying annually, and the performance of 1,700,000 ton miles. From then on, development will depend upon economic conditions, but he believes that the main trunk routes can become self-sufficient in from five to 10 years. In the first year of operations under the new plan, Sir Frederick estimated that the airlines will lose \$4,800,000, which will be made up by subsidy.

Airplanes used on the Indian airlines will be in the 12 to 20-passenger category, and it is probable that wartime transports will be used at first. The Douglas DC-3 is looked upon with great favor, as are other American models. About 35 planes will be needed on the trunk routes at first.

"Within a few years, it will be possible to replace these with new, faster and more economical aircraft now being designed and produced," Sir Frederick stated. "With these postwar aircraft, the speed of air service will be around 200 miles an hour."

In a carefully-worded statement on government policy, just released, Sir

Frederick elaborated on some of the above-mentioned points.

"Two and three day journeys will be reduced to the compass of the day and, later, of the night. A passenger may leave Bombay after office hours and arrive in Calcutta, having dined on the way, in time for bed. Air fares will be fixed at about three annas (six cents) per passenger-mile, that is from 30 to 50% above pre-war air-conditioned first-class rail fares.

"Internal mails will be carried on a surcharge basis. All the mails could not be carried by air without increased postal charges, and the poor man of India should not be made to pay for speed which he does not want . . .

"There is no room . . . for a large number of competing companies who would only succeed in ruining each other. The operations should be restricted to a limited number of companies, whose financial strength and experience appears to fit them best to carry out the task of developing air transport in the interests of the public . . .

Subsidy For Efficiency

"Air transport needs financial assistance during the development period, and particularly during the period necessary to build up the air travel habit. Without it, the country will get only that system of air transport which the private capitalist chooses to develop.

"The object of government subsidy is not to guarantee profits, but to secure the development of some activity which the country needs and which it would not otherwise get.

"A subsidy system has been devised which will enforce efficient management and operation and therefore the lowest cost of operation compatible with safety, regularity, comfort and the high standard of service on which alone air transport can thrive. It will also enforce commercial enterprise in the building up of traffic, so putting the air services at the earliest possible date on a self-supporting basis. Such a system of controlled private enterprise is believed to offer the best prospects of speedy development of air transport."

Sir Frederick revealed to this correspondent that India's airlines will definitely be interested in operating routes outside India, mostly to the east, to Burma and China. Inasmuch as India signed the Two Freedoms document at the Chicago conference, foreign companies should have no difficulty operating into India.

India will provide at least four airports suitable for international planes—Karachi, Delhi, Calcutta and Bombay. Runways of 2,500 to 3,500 yards long and 100 yards wide will be constructed.

In addition to these, over 100 other airports and 50 radio stations will be constructed, the domestic fields having runways 1,000 to 2,000 yards long and 50 yards wide. All together, some 60,000,000 sq. ft. of new runway and pavement will be required.

How Money Will be Spent

Land acquisition and aerodrome construction	\$ 9,900,000
Runways	11,400,000
Hangars, workshops and technical buildings	5,100,000
Control, traffic and administrative buildings	2,700,000
Residential buildings	7,800,000
Air route and aerodrome lighting and equipment	3,900,000

National Planning Association Urges Industry Be Kept Intact

Technological Core Must Be Maintained, Says NPA

THE National Planning Association last fortnight urged by resolution that the U. S. aircraft industry be preserved as a whole to assure maintenance of the technological core essential to the development of postwar aviation.

The Association's resolution followed recommendations by its advisory committee on the aircraft industry, headed by Edward Warner, vice chairman of the Civil Aeronautics Board. The Agriculture, business, labor and international committees of NPA joined in the resolution.

While the aircraft industries advisory committee made no recommendations as to the size of the air forces the U. S. will need, its recommendations did point to the need for a change in the present legal setup for continuing war contracts after V-J Day.

This setup, the committee said, "appears tenuous" because of the statutory requirement for termination of contracts (under the War Mobilization Act) where performance thereof is not needed for the prosecution of the war.

"If this continues to be our national policy," the report said, "there will be a complete interruption of military procurement for an unpredictable length of time."

Production will Fail

If the aggregate skills of the aircraft manufacturing industry—research, engineering, labor, and management—are dissipated by a complete stoppage of production, "the technological loss may be irrecoverable, especially in view of the rapid tempo of technological progress," the report said.

The committee held that civilian production will fail to adequately provide for postwar military technical development for two reasons: First, because "civilian aircraft, especially personal planes are basically different from military types," and second, because "any volume of civilian manufacture presently anticipated will be entirely inadequate to maintain a nuclear manufacturing industry of strength necessary for expansion in time of emergency."

"Knowledge of the postwar level of operations will enable the manufacturers to plan intelligently for the future and to keep together organizations of skilled management and labor," the report said.

"Without such knowledge, many companies may feel it necessary to close down and hoard their assets pending clarification of the outlook. If the industry as a whole knew now the approximate level to which it would shrink on the basis of postwar procurement, a much more orderly liquidation would be possible with less unsettling effects on the national economy and on the lives of the several million people most affected."

The aircraft industries committee has been meeting regularly since March to study the overall problem of reconversion and postwar development of the industry. It will later submit a report on

commercial and personal flying, military aviation, foreign trade in aircraft and postwar employment of wartime workers in the aircraft industry.

Maurice Roddy of Chicago Heads Aviation Writers

Members of the Aviation Writers Association, in conference in Chicago June 7, 8, 9, elected Maurice Roddy,



Roddy

aviation editor of the *Chicago Times*, president for the coming year, James Strebig, aviation editor for the Associated Press was named first vice president and Philip Andrews, editor and publisher of *Air News Magazine*, second vice president. Roddy succeeds George Haddaway, publisher of *Southern Flight*, as president of the Association.

Re-elected were Devon Francis, of *Popular Science*, as executive secretary, and Leslie V. Spencer, of McCann-Erickson, Inc., as treasurer.

The Association voted to raise the annual dues from \$5 to \$10 and the initiation fee was likewise increased from \$5 to \$10. Discussed was a proposal to open up the membership to public relations men in the aviation industry on an affiliate membership basis but no action was taken.

A resolution urging this country to maintain a strong air force during peace time, together with a virile aircraft and transport industry as well as an effective program for scientific research and development, was passed.

Air Power League Group Visits AAF's Eglin Field

Charles E. Wilson, president of General Electric and president of the Air Power League, headed a group of League directors and special guests to the AAF Proving Ground at Eglin Field, Fla., on June 7-9. Among those attending were Larry D. Bell, president of Bell Aircraft; Charles F. Kettering, v. p. of General Motors; P. W. Litchfield, Goodyear Tire and Rubber Co.; Eddie Rickenbacker, president of Eastern Air Lines; and Ralph S. Damon, president of American Airlines.

The board members witnessed highly accurate demonstrations of aircraft bombing and gunnery in an exhibition of the latest developments in American aerial might. Low-flying fighter planes shattered ground and water targets with guns and rockets as a curtain-raiser to the scheduled demonstrations. Fire bombs and high explosive fragmentation bombs also were dropped.

Aviation Calendar

July 9-10—Organization meeting of National Aeronautics Association Joint Air Transport Users Conference, Washington, D. C.

July 22-23—Congress on Air Age Education, auspices Social Science Foundation, University of Denver, Denver, Colo.

July 23-24—Third session of NAA Joint Airport Users Conference, Washington, D. C.

July 30—Executive Committee, International Air Transport Association, meeting in Paris.

Aug. 2-3—Flying Farmers meeting and Farm and Home Week, Oklahoma A. & M. College, Stillwater, Okla.

Sept. 2—Interhemisphere conference on frequency allocations and revisions, Rio de Janeiro.

Oct. 16—First annual meeting, IATA, Montreal.

Oct. 31-Nov. 3—National Aviation Clinic, Oklahoma City. Pre-clinic conference Oct. 27.

Prospects for New Transports Bright, Says Henry Nelson

After week-long conferences with Los Angeles aircraft executives, Henry P. Nelson, director of Aircraft Division, WPB, and director of reconversion planning for the automotive industry, last fortnight told *American Aviation* that the prospect for civilian transports is definitely bright—new twin-engine planes this year and new four-engine equipment by early 1946.

Nelson said that his mission was to check first hand on WPB's program for new civilian transports. WPB is assisting the companies to obtain necessary priority for materials, and his conferences to date show that materials or manpower are not bottlenecks. Pricing of the transports will come under OPA, working with an aircraft advisory committee. The problem of using Government facilities and equipment on commercial planes is being worked out on an individual basis between companies and the DFC. Arrangements, Nelson said, would probably follow a flat fee basis for lease of tools.

Pointing out that airlines have indicated a need for 364 new planes, 205 of which are four-engined, Nelson reported cost of converting surplus military transports in man hours and money was far greater than obtaining new equipment.

Asked to comment what effect civilian production would have in bolstering aircraft employment, Nelson replied that it was impossible to estimate at this time. "We know there's bound to be a shrinkage, and a big one, from the nation's total of 1,600,000 aircraft workers. Until we know the size of the military postwar air forces, no one can predict how many will remain in aircraft manufacture."

He indicated that a report would be ready shortly for Congressional consideration which would contain the recommendations from the military on the size of a peace-time air force.

Private planes, although receiving no priority assistance, will be on the market this year in substantial quantities, Nelson said.

American Aviation Associates Wins Sweeping Court Victory

Decision Against 'Guide' Reversed by U. S. Court

AMERICAN AVIATION ASSOCIATES, INC., publishers of American Aviation, American Aviation Traffic Guide and other aviation publications, has won a sweeping and unqualified victory in the copyright infringement and unfair competition suit instituted against it almost two years ago by The Official Aviation Guide Company of Chicago, publishers of The Official Guide of the Airways.

The United States Circuit Court of Appeals for the Seventh Circuit (Chicago), on June 15 reversed the decision of the District Court which had held that American Aviation Associates, *Universal Airline Schedules*, was an infringement of the Official Guide of the Airways, and remanded the case to the District Court "with directions to dismiss the complaint". The appeal was held before Justices Evans, Major and Kerner.

Late in 1942 American Aviation Associates decided to begin publishing a monthly guide of airline schedules, tariffs and general air travel information. In April 1943, the first issue of *Universal Airline Schedules* appeared and met with immediate favorable reception. Every scheduled airline in the United States took listing space and inserted display advertisements, and many airlines immediately adopted the book for their official use.

Late in July, 1943, the Official Aviation Guide seized all of the type and plates for the August issue of *Universal*, which was about to go to press, under a writ of seizure obtained without notice to American Aviation Associates. Two days later, American Aviation regained possession of its type and plates, published the August issue which was delayed slightly and defeated a motion for a temporary injunction.

The Official Aviation Guide Company had charged infringement of copyright and unfair competition, claiming that *Universal* was an outright "copy" of its own copyrighted publication. American Aviation Associates maintained that it had brought out a new publication as different, original and distinct, as is possible considering that timetables themselves must be generally uniform and considering that the airlines order and pay for the schedules pages.

Having been denied a temporary restraining injunction, The Official Aviation Guide Company then sought a permanent injunction. The hearing was held in March 1944, before Judge William J. Campbell, in Chicago, and continued over a three-day period.

Late in September, Judge Campbell issued a permanent injunction against *Universal* on grounds that this publication infringed upon *The Official Guide of the Airways*. The decree called for costs, attorneys fees and damages.

Anticipating that such a decree might be issued, American Aviation Associates, in the meantime, had prepared an entirely new publication known as *American Aviation Traffic Guide*. New type was used throughout. This new publication appeared in October, replacing *Universal* and providing a continuity for subscribers. Certain controversial features were eliminated and the contents were generally restricted. The *Traffic Guide* is not, and never has been, subject to litigation.

American Aviation Associates, through its attorneys, Hayes, Shehee and Quigley, and Wilfred Stone of Stone, Artman and Bisson, appealed the decree to the United States Circuit Court of Appeals. The appeal was heard in May, 1945, and the court handed down its decision on June 15, reversing the lower court's decree.

The case has been one of the most complex in copyright history. It not only involved the rights of airlines to disseminate timetable information in the form they desired and to whomever they desired, but it also involved the relationship of advertisers and publishers.

In its decision, the Court of Appeals found that the covers of the two publications (*Universal* and *The Official Guide*) were "so completely dissimilar that no one could be confused or misled into buying one thinking he was buying the other."

"From the salient features of the two covers, it is clearly apparent to sight and understandingly evident to the senses that they are so completely different as to preclude any confusion. Hence if by 'garb' plaintiff means the exterior raiment of its publication, there is no copying."

After reviewing the interior contents of the two books, and citing the numerous differences, the court found "that the contents of any two comparable pages in the two publications are not identical."

"From the comparison it is apparent that although much of the information carried by the two magazines is the same, the sequence and arrangement thereof are not identical. Nor are they similar enough to warrant the charge of infringement."

Fifteen airlines, comprising the entire membership of the Air Transport Association except TWA, Inc., and Pan American Airways, entered the appeal as amici curiae on the grounds that if the lower court decision prevailed, the airlines would be unable to disseminate their schedules and tariffs freely. The airlines in their brief prepared and filed by Donald Markham, attorney for the ATA, pointed out that they prepared the material appearing in schedules publications and that they did not part with their ownership of this information when they ordered it inserted in one or more publications.

Wayne W. Parrish, editor and publisher of the *American Aviation Publications*, issued the following statement after the Court of Appeals had rendered its decision:

"We are deeply gratified that we have been upheld in our right to publish a

schedules publication. We entered this field with honesty of purpose and because we thought we could publish a superior periodical which would serve the airlines more accurately and better than they had been served before. When our right was challenged by a firm that sought legal redress rather than healthy and forthright competition, we were confident that we would be upheld.

"A great deal of credit must go to Mr. H. D. Whitney, managing editor, for his tireless and loyal endeavors on our behalf. The litigation has been a handicap in numerous ways, for we were unable, for a time, to include adequate maps and other information which we felt we had a right to include in our publication. The patience and loyalty of our subscribers, and of our airline customers, is deeply appreciated. Despite the production and editorial handicaps, our new publication, *American Aviation Traffic Guide*, has continued to expand and is today the most widely used schedules book by the airlines and by far the largest in size and content.

"Real appreciation goes also to Mr. Stuart Tipton, president of the Air Transport Association, and to Mr. Donald Markham, the ATA attorney, for ably presenting the airlines' position. And the company wishes to pay a high tribute also to its attorneys, especially Mr. Wilfred Stone and Mr. Glenn Shehee, of Chicago, for the able manner in which this important and precedent-setting case has been handled."

Provisional World Meeting in August

The Provisional International Civil Aviation Organization will hold its initial meeting in Montreal, probably in August. State Department officials said last fortnight. PICAQ was activated June 6 when 30 countries became signatories to the Interim Agreement on Civil Aviation.

The provisional organization will function for not over three years, and will have advisory and technical functions but no powers of economic regulation. Included in the set-up is the Interim Council, consisting of 20 nations elected at the Chicago International Aviation Conference.

Council members are Australia, Belgium, Brazil, Canada, Chile, China, Colombia, Czechoslovakia, Egypt, El Salvador, France, India, Iraq, Mexico, Netherlands, Norway, Peru, Turkey, United Kingdom, and the United States.

In addition, these other nations have accepted the Interim Agreement: Afghanistan, Ethiopia, Haiti, Iceland, Ireland, Lebanon, Liberia, New Zealand, Poland, and Portugal.

Gen. Wilson Honored

Brig. Gen. T. B. Wilson, chairman of the board of TWA, was awarded the order of the Cloud and Banner by the Chinese Government at ceremonies at the Chinese Embassy June 20. The award was in recognition for Wilson's work in the CBI theater while he was in the Army. Other officers to receive the award include Lt. Gen. Harold L. George, commanding general of the ATC.

Navy's Most Powerful Scout Plane Goes to War



THE CURTISS SC-1 SEAHAWK, a single-place, single-float scout observation plane with nearly three times the horsepower of previous craft of this type, has now joined the U. S. fleet in the Pacific, according to Navy Dept. announcements.

Designed by Bruce Eaton, a development engineer at the Columbus, O., plant of Curtiss-Wright Corp., the Seahawk is an all Curtiss-Wright product except for the main float. It is powered by a new model Cyclone 9 engine rated at more than 1,050 hp and said to have the lowest weight-horsepower ratio of any engine now in production, and equipped with a four-bladed Curtiss electric propeller. The blades are of the paddle type designed to produce added rate of climb and cruising efficiency at high altitude.

One of the most interesting features of the new plane is the main float which was designed and built by Edo Float Co. and is constructed to include bomb bay doors controllable from the pilot's cockpit. There is room inside the float, according to the Navy, to carry a good supply of bombs or auxiliary fuel tanks for added range. To permit rough water landings in rescue and other operations, the pedestal attaching the float to the fuselage has been designed to withstand a stress of six gravities without snapping off.

The principal tasks of the SC-1 are to scout for enemy fleet units, to spot gunfire in both sea actions and during fleet support of landing operations, and to act as a search-rescue plane. In the latter operation it is expected to prove greatly superior to previous observation scout types because of its tremendously increased horsepower. In normal operations, an observation-scout is catapulted from a cruiser or battleship, and upon completion of its mission, lands in the water in the lee of the ship. The Seahawk, however, is convertible to a land plane through substitution of wheels for floats—an operation which requires about six hours, according to Curtiss-Wright officials—and can therefore also be used for shore based duty.



Curtiss Seahawk—The Navy's SC-1 Seahawk is reported to have almost three times the power of previous observation scout types. In flight (top) it can climb with the best Jap fighters, while its paddle-bladed propeller gives it exceptional high altitude performance. On the water (center) it is capable of withstanding heavy seas due to a pedestal strut stressed to take six times the force of gravity. With wings folded (bottom) the SC-1 occupies little space and can be easily stored on a cruiser or battleship catapult. The heavy struts toward the top of the right hand picture are the outboard float struts, the floats themselves being nested out of sight against the fuselage. While the Seahawk can be equipped with wheels for shore-based operation, the wheels shown in these pictures are beaching gear and not designed for landing or take-off. The SC-1 is powered with a Cyclone 9 engine driving a Curtiss electric prop. The main float, designed and built by Edo Aircraft Co., has bomb bay doors which are controllable from the cockpit.

Aeronautical Radio, Inc., Forms Subsidiary to Operate in Mexico

Other Affiliates Abroad Are Being Contemplated

EXTENDING its activities into the international field, Aeronautical Radio, Inc., the cooperative, non-profit communications organization of the United States airlines, has organized Aeronautical Radio de Mexico, S. A. with offices in the Edificio Internacional, Mexico City, D. F.

Mexarinc took over operation of the control tower at Mexico City June 15.

The new company will operate as a non-profit corporation wholly owned by Arinc and the Mexican carriers, with the former holding a majority of the stock and the latter participating on the basis of one share per company.

Expenses of the corporation will be born by the participating Mexican carriers in direct proportion to their operating plane miles and their relative use of the company's radio stations and other facilities. Under the terms of the stockholders' agreement, each participating company will grant to Mexarinc, as the new subsidiary will be known, the right of unrestricted control over the use and operation of all radio transmitting and receiving stations on the ground, as distinguished from radio equipment in aircraft, now or hereafter owned by that company in Mexico, having for their purpose the as-

surance of safe, rapid and efficient transportation of persons and property by air. This will include, among others, aeronautical stations communicating with aircraft and with each other; aids to air navigation such as radio ranges, markers and localizers; and meteorological stations for gathering and disseminating weather information, together with all equipment associated with, and property incidental to, such stations.

Participating companies in the new corporation at the present time are: Aeronautical Radio, Inc.; Aero Transportes, S. A.; American Airlines de Mexico; Aerovias Braniff; Lamas; Compania Mexicana Aviacion; Transportes Aereos Mexicanos; Comunicaciones Aereas de Vera Cruz; Aeronaves, S. A.; and TACA.

The purposes of Aeronautical Radio de Mexico are even more all-inclusive and far reaching than are those of the parent company, and it may well serve as a model for similar international subsidiaries in all countries which are now or may be in the future served by American air carriers.

Briefly, Mexarinc proposes to function as a service agency to Mexican air carriers, to coordinate and operate air navigational aids, aeronautical and ground communications, and meteorological facilities, as required in the interests of the member companies. It will further be the policy of the organization to establish minimum standards for member com-

panies as far as aircraft radio equipment and aircraft electrical systems are concerned, and to cooperate with the Mexican Government in the establishment of safe and efficient airport and airway traffic control rules and procedures.

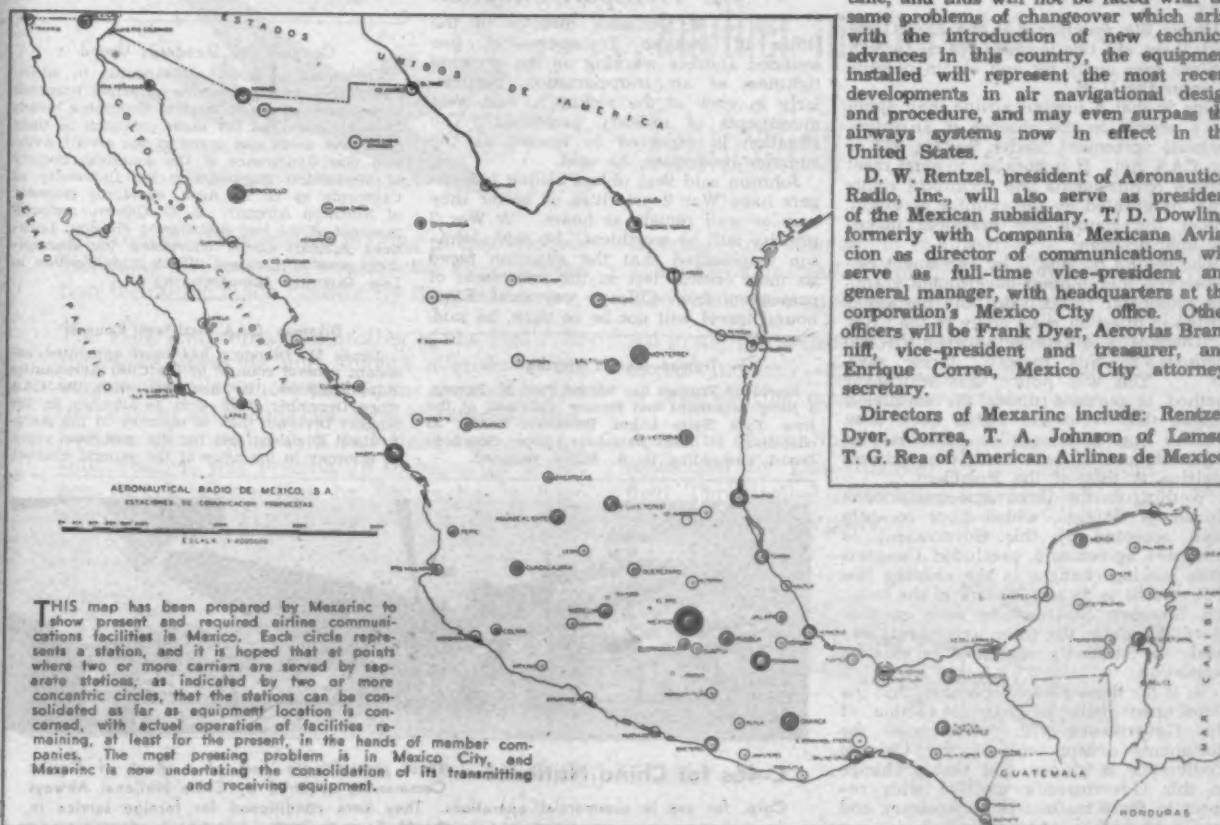
The company will operate under the applicable laws and communications regulations of the Republic of Mexico, and will be responsible to the capable, forthright Ingeniero Martinez Ternel, Secretary of Communications and Other Public Works and the appropriate heads of departments in his office. It will be directly responsible to General Alfredo Lezama Alvarez Jefe, chief of the Civil Aeronautics Bureau, for the proper functioning and coordination of air navigational aids and other facilities, and to General Brigadier Romon Cortez Gonzalez, director general of Telecommunications, for the proper operation of radio stations in accordance with the laws of Mexico. It will work closely with Ingeniero Estandis Pena Ramirez, director general, Ingeniero Jose C. Gomez Jefe and others of the meteorological services in the establishment and integration of supplementary meteorological facilities with those of the Mexican Meteorological Service.

Navigation Network Planned

In line with its avowed purpose of promoting establishment of standards and facilities for safe and efficient service in Mexico, Mexarinc plans to establish a network of air navigational aids similar in every respect to those now serving commercial airliners on American airways. Since a majority of these facilities will be installed on routes where no comparable facilities are available at the present time, and thus will not be faced with the same problems of changeover which arise with the introduction of new technical advances in this country, the equipment installed will represent the most recent developments in air navigational design and procedure, and may even surpass the airways systems now in effect in the United States.

D. W. Rentzel, president of Aeronautical Radio, Inc., will also serve as president of the Mexican subsidiary. T. D. Dowling, formerly with Compania Mexicana Aviacion as director of communications, will serve as full-time vice-president and general manager, with headquarters at the corporation's Mexico City office. Other officers will be Frank Dyer, Aerovias Braniff, vice-president and treasurer, and Enrique Correa, Mexico City attorney, secretary.

Directors of Mexarinc include: Rentzel, Dyer, Correa, T. A. Johnson of Lamas, T. G. Rea of American Airlines de Mexico.



Grew Defends Acts Of State Department In Letter to Bilbo

Acting Secretary of State Joseph C. Grew has advised Sen. Theodore Bilbo (D., Miss.), a member of the Senate subcommittee on aviation, that the Department believes that it was thoroughly within its rights to accept for the U. S. Government as executive agreement the Interim Agreement, the International Air Services Transit Agreement and the International Air Transport Agreement signed by delegates at the International Civil Aviation Conference held at Chicago.

Sen. Bilbo asked the Department for an explanation following a declaration by the Executive Council of the American Federation of Labor that these three agreements "would work radical changes in the law of the United States" and that their acceptance by this Government as executive agreements, rather than their submission to the Senate for its advice and consent "is illegal."

The A. F. of L. statement "is a serious charge and one which prompts me to acquaint you fully with the views of the Department of State," Grew replied.

In the course of a detailed explanation, Mr. Grew said the Department believes the Air Commerce Act of 1926 and the Civil Aeronautics Act of 1938 provide legislative authority for the Government to accept the Interim Agreement and the "Two" and "Five Freedoms Agreements" without reference to the Senate, and quotes the existing statutes in this regard.

Under the provisions of the law, Grew said, there are two ways in which foreign airlines may apply for and obtain permits to enter the U. S.

One is that a foreign airline may apply for a permit, in the absence of an international agreement, under Section 402 of the CAA Act. If it does so, it must meet certain requirements and reciprocal rights must be granted by the country of origin. Under the statute the President makes the final decision.

The second method is by agreement between this and another government granting reciprocal rights. But the particular airline in question must apply to the CAB.

"There is no difference between the two methods in this respect," Grew says.

"... You will notice that whichever method is pursued under the statute, a finding that reciprocal rights have been granted (by agreement or otherwise) is required, and in both cases the ultimate decision is that of the President.

"Nothing in the three agreements concluded at Chicago, which have recently been accepted by this Government as executive agreements, precluded Congress from making changes in the existing law if it sees fit to do so. We are of the opinion, however, that nothing done or provided for under the three agreements exceeds the authority contained in existing legislation.

"It is for these reasons, Senator, that the Department believes that the action of this Government with reference to the documents arising out of the Chicago Conference is proper, and that a change in this Government's position with respect to these matters is unnecessary and would be highly undesirable."



Confer on IATA—John E. Sletor (left) vice president of American Export Airlines, and John C. Cooper, vice president of Pan American Airways, conferred in Montreal June 12 with H. J. Symington, president of the International Air Transport Association, concerning arrangements for the meeting July 30 in Paris of the IATA executive committee and the first general meeting of the association to be held in Montreal Oct. 16.

'Ike' for Unity

General Eisenhower said in an address at West Point June 20:

"The Army and Navy and Air Force must be a unit. If I had my way they'd all wear the same uniform. But I don't suppose that Congress and the Big Brass would agree with me."

ODT Sounds New Warning On Transport Situation

Col. J. M. Johnson, director of the Office of Defense Transportation, has sounded another warning on the growing tightness of air transportation, particularly in view of the pickup in east-west movements of military personnel. The situation is expected to worsen as the summer progresses, he said.

Johnson said that unless airline passengers have War 2 priorities or better they may as well remain at home. "A War 3 priority will be worthless," he said. Johnson emphasized that the situation faced its most critical test in the movement of passengers from Chicago westward. East-bound travel will not be so tight, he said.

Truman Names Herzog

President Truman has named Paul M. Herzog, a Navy lieutenant and former chairman of the New York State Labor Relations Board, as chairman of the National Labor Relations Board, succeeding H. A. Mills, resigned.

1 Agent to Dispose Of Surpluses Abroad, SWPB Announces

Surplus War Property Board has set up a single disposal agent for the disposal of all surpluses abroad. The agent, Army-Navy Liquidation Commissioner, has received broad powers of administration from SPB under new regulations, with direct application to aviation plants and facilities.

Mechanism for the foreign disposal set-up is geared to accomplish these objectives: (1) channelling any surplus war goods into immediate further usefulness in prosecuting the war; (2) disposal of remaining war goods with any eye toward building up U. S. export markets; (3) making the property available to other agencies authorized by Congress to assist in rebuilding devastated areas in Europe, and (4) obtaining the best possible return, either in dollars or other benefits, for the property.

SPB's action rescinds the authority of the Foreign Economic Administration to dispose of surplus aircraft and other aviation equipment overseas, as well as that of the owning agencies other than the War and Navy Departments and Maritime Commission to make disposals.

Sections 11 and 12 of the new regulation state that ANLC may dispose of surplus aircraft plants and facilities, aircraft and aircraft parts, radio and electrical equipment without prior submission to Congress.

Congress on Standards Urged

An annual congress of standards in which committees representing the principal branches of engineering would meet to determine means of joint action on the main problems in their respective fields was urged at the recent Aviation War Conference of the American Society of Mechanical Engineers at the University of California by G. M. Aron, standards engineer of Northrop Aircraft. E. C. Osborn, assistant manager of the tool engineering division, Lockheed Aircraft Corp., addressing the management session, discussed "Work Simplification in Low Quantity Manufacturing".

Dikeman CAA Assistant Counsel

James M. Dikeman has been appointed assistant general counsel of the Civil Aeronautics Administration. He has been with the CAA since December, 1940—first as attorney in the Airport Division, then as attorney in the Aeronautical Division, and for the past two years, as attorney in the office of the general counsel.



C-46s for China National—These aircraft are part of a fleet of Curtiss Commandos acquired by China National Airways Corp. for use in commercial operations. They were conditioned for foreign service in the U. S.



Flush rivets—smooth ailerons in the Kingcobra



... another magnesium fabrication advantage

Magnesium is famous for making aircraft *lighter*. Here's an airplane that's *built better* by a fabrication technique made possible by magnesium.

The P-63 Kingcobra, big brother of the Bell P-39 Airacobra, owes its fine, smooth ailerons to the magnesium alloy sheet that forms their skin, and to the offset extrusions that form the trailing edge. Because magnesium is a full third lighter than aluminum, it was possible to increase the thickness of the aileron skin to .040 inches without weight penalty. This thicker sheet avoided "oil-

canning" and also made it possible to machine countersink, instead of dimple, for the flush rivets. The result—a completely smooth surface.

All in all, it's another fabrication triumph for the aircraft industry—and for magnesium... the kind of progress that means better products—for you.

A wealth of such fabrication knowledge has been assembled by Dow—pioneer in the magnesium field. The detailed information is available to you at the nearest Dow office.

MAGNESIUM

THE METAL OF MOTION



MAGNESIUM DIVISION, THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • St. Louis • Chicago • Houston • San Francisco • Los Angeles • Seattle



"How Bataan's Angels of Mercy finally *SPROUTED WINGS*"

Based on a true story taken from the war record of the Curtiss Commando



"Three Dreadful Years in Santo Tomás had just about robbed us of all hope. Then, at long last, the Americans burst into Manila. And we were free! Soon, 80 of us, including 71 nurses, were driven outside Manila. There, to our amazement, a huge Commando was waiting on a boulevard. Somehow all 80 piled into that 40-passenger transport, each with 25 pounds of baggage. Then down the boulevard, and around a dog-leg turn, we roared. How that transport, with its double load, ever got off the ground, I'll never know. But suddenly we were air-borne. We had sprouted wings... wings of freedom. We were going home!"



THAT'S WHY I'M FOR THE AIRLINES THAT

Fly Commando!



Back-door Delivery. On one side, 30 passengers board a Commando... while the cargo holds are being loaded on the opposite side. With this full passenger load, a Commando carries at least 2 tons of luggage and cargo. Postwar, athletic teams, theatrical troupes or orchestras will bring along all of their equipment in a Commando!



A Minute Saved Is Money Earned. Accessibility is an outstanding Commando feature. For example, an entire power unit, including the propeller, cowl, oil system and fire wall can be changed in 20 to 30 minutes. Such accessibility reduces ground time... adds to money-making time in the air.



Double Comfort is built right into the Commando! Take the two beautifully appointed, separate lavatory lounges aft, for instance. And there's a deluxe sky kitchen at the front of the luxurious cabin. The Commando is the only airline transport today that combines such complete travel convenience with twin-engine economy.

THE CURTISS

Commando

Today's Great Lifeline
Tomorrow's Great Airliner

**CURTISS
&
WRIGHT**
FIRST IN FLIGHT

Scotland Wins Concessions From Air Ministry

Prestwick Retained as International Gateway

SCOTLAND has won important concessions from the Ministry of Civil Aviation in its fight against the monopoly trend in British air transport and in the retention of the vital war-time airport at Prestwick as an international port of entry for commercial airlines.

Spearheading the campaign has been Group Captain David McIntyre, managing director of Scottish Aviation, Ltd., which operates the Prestwick airport.

The Ministry has informed the House of Commons that three airports would be designated for both traffic and non-traffic stops, one in Northern Ireland, Prestwick and Heath Row, near London. Pending completion of the large Heath Row airport, Prestwick will be used.

Another concession is that a Scottish aviation firm, to be determined by a tribunal, will be permitted to operate an air service to all of the Scandinavian countries. Scottish Aviation Ltd. is chief contender for this service. Similarly a Scottish operator will be permitted to fly in any point within the United Kingdom, and independent operators will be permitted to operate to various island points in the U. K.

Thus the British Government's position with regard to the White Paper on civil aviation is changing. And it now seems certain that Prestwick will continue to be an important point of call for all North Atlantic and Scandinavian air traffic.

Swedish Line Begins

Regular air traffic between the British Isles and Sweden began June 1. Prestwick is the terminal. Planes leave Stockholm each morning at 7, arriving in Prestwick at 1:40 p.m., departing for Stockholm at 3:40 p.m. and arriving in Sweden at 11:15 a.m. Gothenburg is an intermediate stop.

Railway Air Service

The airplane being used on the Prestwick-Croydon air service in the U. K. by Railway Air Services is a 5-passenger de Havilland Dragon Rapide. The flight requires three hours and forty minutes.

Panagra Anniversary

The tenth anniversary of regular air service in Bolivia by Pan American-Grace Airways was celebrated May 31 at El Alto, the world's highest commercial airport at La Paza, Bolivia (13,400 feet). John T. Shannon, Panagra vice president and Don Ernesto Aranibar, Bolivian representative of Panagra, were hosts at the ceremonies.

Venezuela Line Wants DC-3s

TACA de Venezuela, a Venezuelan airline which is owned 55% by Venezuelans and 45% by TACA Airways, is negotiating in Washington with the Surplus Property Board for three additional Douglas DC-3 airplanes to be used in carrying out the airline's proposed expansion program in Venezuela. The company, newest Venezuelan airline, began flying the first of the year on a limited basis with two Beechcraft. Since then the company has acquired two 16-passenger Douglas DC-2½ aircraft and one

21 passenger DC-3 and placed them in service to the most important regions of Venezuela.

P-51s to Sweden

The 50 P-51 Mustangs which North American Aviation sold to the Swedish Air Force, have arrived in Sweden. They were flown from bases in Britain to Stockholm.

Tata Coming Soon

J. R. D. Tata, chairman and director of various Tata companies including the Tata airline, is coming to the U. S. shortly in company of a group of Indian industrialists. Tata started the aviation department of Tata Sons Ltd. in 1932 and was the first pilot to qualify in India. He has held a flying license since 1929. Now 41 years old, he is interested in iron and steel, and chemicals, as well as airlines and aircraft.

4 New British Planes

The British Ministry of Aircraft Production has announced four new types of aircraft: (1) a jet-propelled single seater fighter called the Vampire, powered by a single gas turbine engine with speed in excess of 500 mph, and being built by de Havilland (2) a twin-engined fighter by de Havilland which is a scaled down version of the Mosquito with top speed of over 470 mph; (3) a single seater single-engined fighter developed by Vickers-Armstrong from the Spitfire and called the Spiteful, powered by Rolls-Royce Griffon engine and top speed of over 460 mph; and (4) a four-engined bomber developed from the Lancaster and called the Lincoln with heavy bomb load and long range, built by A. V. Roe & Co. and to be made also in Canada and Australia. It is powered with Rolls-Royce Merlin engines.

First Mustang Out

The first Australian-built P-51 Mustang was given its initial test flight from the Commonwealth Aircraft Corporation factory at Fishermen's Bend, Melbourne, on May 1, according to word just arrived here. It was equipped with a Rolls-Royce Merlin engine also built in Australia, and achieved a speed of over 400 mph. flying level in its first flight. The first 80 Mustangs to be delivered to the RAAF will be assembled from imported parts from North American Aviation; thereafter they will be wholly Australian built.

TACA Signs Contracts

Renewal of mine contracts with La Luz Mining Co. and Neptune Gold Mining Co. in Nicaragua is announced by TACA Airways System. Contracts will run for 5 years. Both mines have been supplied with equipment, supplies and personnel by TACA since 1936, a total of 70,000,000 lbs. having been flown by air to date.

Colombian Airlines Plans

TACA de Colombia, S.A., national segment of the Latin American TACA system, wants to begin service between Colombia and the United States with Lockheed Constellations or Douglas DC-6 equipment, Dr. Eduardo Lopez, president, said on a visit to New York. The company has filed an application to fly to this country.

Albert G. Sweetser Editor Of International Aviation

Albert G. Sweetser, of the Air Transport Information division of the economic bureau of the Civil Aeronautics Board, has joined the American Aviation Publications as international editor. A native of Massachusetts, Mr. Sweetser received his A.B. degree from Harvard College in 1937, and later attended the New York University Graduate School of Business Administration, the Graduate Business School of Boston University, and American University in Washington.

In 1942 he joined the Office of Air Transport Information in the Department of Commerce, and continued with this organization when it was absorbed into the CAB in 1943. He has had charge of compiling schedule information for airlines of the world. In his new post he will edit *International Aviation*, weekly newsletter, and contribute on international aviation to other publications.

New TACA Directors

Four new directors have been elected to the board of TACA Airways, S.A., as follows: Herbert A. May, of Pittsburgh, v.p. of Union Switch and Signal Co.; Frederick M. Peyser, of New York, partner of Hallgarten and Co.; Webster B. Todd, chairman of the board of Todd & Brown Engineering Corp., New York; and John M. Lockhart, exec v.p. of TACA Airways.

AITAC Studies Private Flying

The Air Industries and Transport Association of Canada has appointed a Committee on Private Flying to investigate, discuss and report on air regulations and other conditions applicable to the operation of privately owned aircraft. Named to the committee were: P. C. Garratt, De Havilland Aircraft Co., (Eng.); W. N. Delaher, Fleet Aircraft Co., Ltd.; C. R. Leavens, Leavens Bros. Air Services, Ltd.; and R. L. Gibson, Cub Aircraft Corp., Ltd.

10th Air Anniversary in Bolivia

John T. Shannon, vice president and Don Ernesto Aranibar, Bolivian representative of Panagra were hosts to Bolivia's President Gualberto Villarroel, his cabinet members, and U. S. Ambassador Walter Thurston at ceremonies May 31 Bolivia, marking the 10th anniversary of air service in Bolivia at La Paz. Postmaster General Llevana witnessed the mailing of first letters to bear the special commemorative airmail stamps issued for the occasion.

Polish Lines State Controlled

All Polish airlines have been placed under state administration in accordance with a decree issued by the Ministry of Means and Communications, press dispatches from Warsaw disclose.

World's Newspapers By Air

Reading your favorite American daily newspaper in London, Paris or Moscow, on the date of issue, is one of the possibilities of the postwar era. Already a lightweight air edition of the *London Times* is being flown to the United States in small numbers. If metropolitan dailies of the United States follow the example of the *Times*, according to the Air Transport Association of America, they would be able to extend their present circulation radius not only in this country but to reach out into Central and South America, England and continental Europe, as well as other global points.



RCA Radio Altimeter

in the *Black Widow*

Night-fighting is dangerous work!

Flying almost entirely by instruments, the night-fighter must locate, pursue and destroy the enemy "intruder." Sometimes the chase is a straightforward matching of your speed against his. But more often the enemy, as he becomes aware of pursuit, takes "evasive" action. Then he may turn, twist, dive—seek the protection of low-level flight.

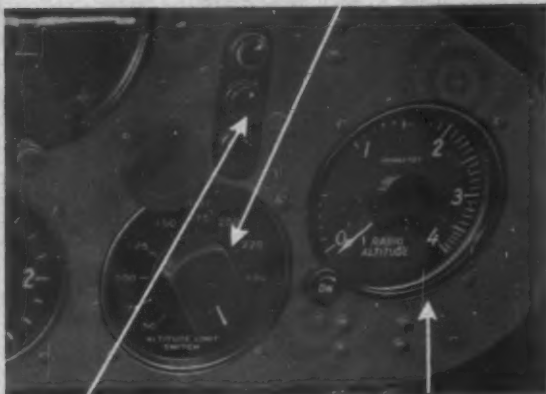
"Hedge-hopping" in the dark is risky business. The enemy does it because he's desperate—Allied flyers can do it because of their RCA-designed radio altimeters. These instruments give them

direct information on their "clearance" over ground (i.e., absolute altitude). And they read accurately at levels below fifty feet!

The altimeter used in the "Black Widow" is but one of the series designed by RCA. It is a fact that, since 1940, RCA has led in radio-altimeter designs. Today, ALL of the altimeters being mass-produced for the Army, the Navy and the British are of RCA design. After the war, RCA will continue to design and produce communications, radar and altimeter equipment of the most advanced design to safeguard the operation of commercial and personal aircraft.

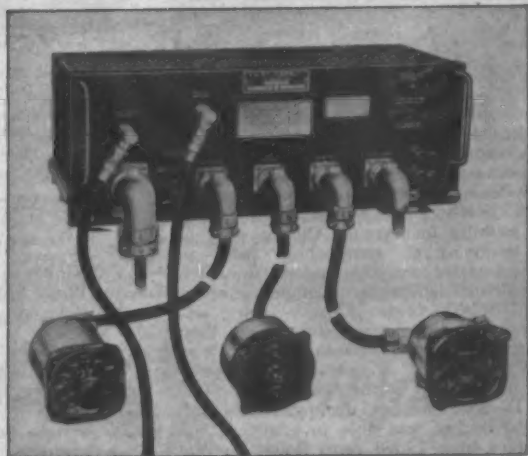
82
BUY WAR BONDS

1. Pilot sets optimum height by turning knob on altitude-limit switch.



2. Amber light indicates maintenance of correct height; red indicates too low; green too high.

3. Dial provides reading of height in feet.



RADIO CORPORATION OF AMERICA

RCA-VICTOR DIVISION • CAMDEN, NEW JERSEY

War Changes South American Commercial Aviation Profoundly

2 Major European Lines Vanish; But 1 May Resume

(By American Aviation's South American Correspondent)

One of a series of two articles on the struggle for a reorganization of commercial aviation in South America.

WORLD WAR II now over in Europe and entering its final phase in the Pacific has wrought profound changes in the general structure of commercial aviation in South America. Two major European airlines—Air France and Deutsche Lufthansa—which held virtual monopolies over traffic in certain parts of South America have vanished as a direct consequence of the war. [But Air France plans to resume—Ed.]

The endeavor of Mussolini to link Europe with South America by means of his *Linee Aeree Transcontinentali Italiane* (LATI) was, likewise, thwarted. Established, in 1940, following the cessation of Lufthansa's transatlantic services, LATI was forced out of the South American picture a year later.

An analysis of the commercial aviation picture in South America would, of course, be incomplete without a detailed study of the operations of Pan American Airways and its West Coast affiliate Pan American-Grace Airways (Panagra) both of which, in their respective spheres, have replaced the services formerly operated by the French and German airlines. With the return of normal commercial operations there is no doubt that the virtual monopoly enjoyed by PAA and Panagra in South America will be challenged in varying degrees by new international carriers and by domestic operators in the countries over which the great American networks extend.

PAA Follows Trend

The development of PAA's operations in South America has always been patterned to meet the requirements of the multitudinous different conditions and circumstances prevailing in that part of the world. In Argentina for instance, it has followed one trend of development; in Brazil, another, and so on.

A striking instance of the prowess of this company in entrenching itself in Latin America was the manner in which it eliminated Lufthansa's Colombian operation (SCADTA) in 1939, by taking advantage of deep-seated differences then existent between Lufthansa and Dr. Peter Paul Bauer, one of Germany's aeronautical pioneers in South America.

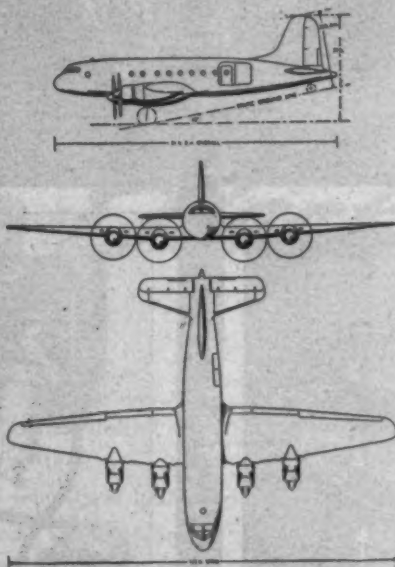
In Bolivia, Panagra, through timely and skillful action, was able to edge out the Germans from Lloyd Aero Boliviano, and as a consequence of the complete reorganization of the company is now controlling the operational end of the business.

Pan Am's plan of action in South America must differ very substantially from its program in Central America. In the latter it is more deeply entrenched and can scent any possible competition, from outside or within, long before it is even in the wind. But in South America

its program must be more elastic; more adaptable to sudden and profound change, for the aviation picture in this latter field is liable to be revolutionized overnight, and competition here can certainly offer PAA more potential dangers than it can in Central America, because it's a bigger field and there's much more at stake.

Biggest potential challenge to PAA after the war will come from newly-established national airlines, which have sprung up or which will make a future appearance in about every South American Republic. There is already every indication that they will threaten PAA's preponderance, not only in cabotage traffic, but in international traffic as well.

Domestic airlines in South America—with the exception of those sponsored by PAA—were virtually non-existent prior to the war. There were incipient lines here and there, but all suffered from lack of capital, lack of technical experience, and, above all, lack of equipment. One notable exception is "Aeroposta Argentina," which for the past sixteen years has operated one of the most difficult routes known to commercial aviation with a safety record seldom equalled and never excelled. But even this company has felt the lack of much needed equipment, and



Hermes Details—Payload on the 34-passenger Handley

Page Hermes, drawings of which appear above, is reported to have been increased 5000 pounds with no increase in structure weight, according to British sources. Under the revised load figures, the Hermes would carry a payload of 15,950 lbs. 1740 miles at 191 mph., or 1610 miles at 240 mph.; 12,000 lbs. 2450 miles at 191 mph.; or 2200 miles at 240 mph.; 8850 lbs. 3030 miles at 191 mph., or 2710 miles at 240 mph. With an extra 300 gallons of fuel, maximum range with 6350 lbs. payload is 2440 miles at 191 mph. or 3030 miles at 240 mph.

has had to struggle along as best it could with outdated JU-52 equipment.

The Germans, through Lufthansa, were the only foreign operators to make any serious and systematic penetration into domestic operations in South America. Where the direct operation of airlines was not possible, they obtained the desired results through the sale of aircraft and through long-term loans or subsidies which, sooner or later, gave them control over what were ostensibly national lines.

Air France lacked the funds and the organization necessary to enable it to pursue a similar policy in that respect.

Prior to the war few, if any, of the South American countries had established any concise aviation policy, and decisions were usually made on the spur of the moment, as witnessed by the following contracting examples of so-called "policy":

(a) Complete and unrestricted granting of concessions to foreign operators for the exploitation of both domestic and international routes.

(b) Creation of domestic airlines with native capital and with heavy national subsidies.

Most countries followed one or other, or both these general policies. But most of them found out that with the exception of international routes or feeders to trunk routes it was a difficult job to maintain domestic lines linking one end of their countries with another. In Argentina, Brazil, Chile and Peru, in face of the difficulty of maintaining regular service over sparsely populated areas, the army air forces stepped in and established services with the professed intention of turning them over to commercial exploitation once they had been properly established as paying proposition.

Set Up General Pattern

Towards the end of 1942, several South American Governments decided to re-examine and amend their commercial aviation policies. As if acting in common accord, they suspended the unrestricted granting of flying concessions and set up the following general pattern:

(a) Elimination of the influence of foreign companies on domestic traffic;

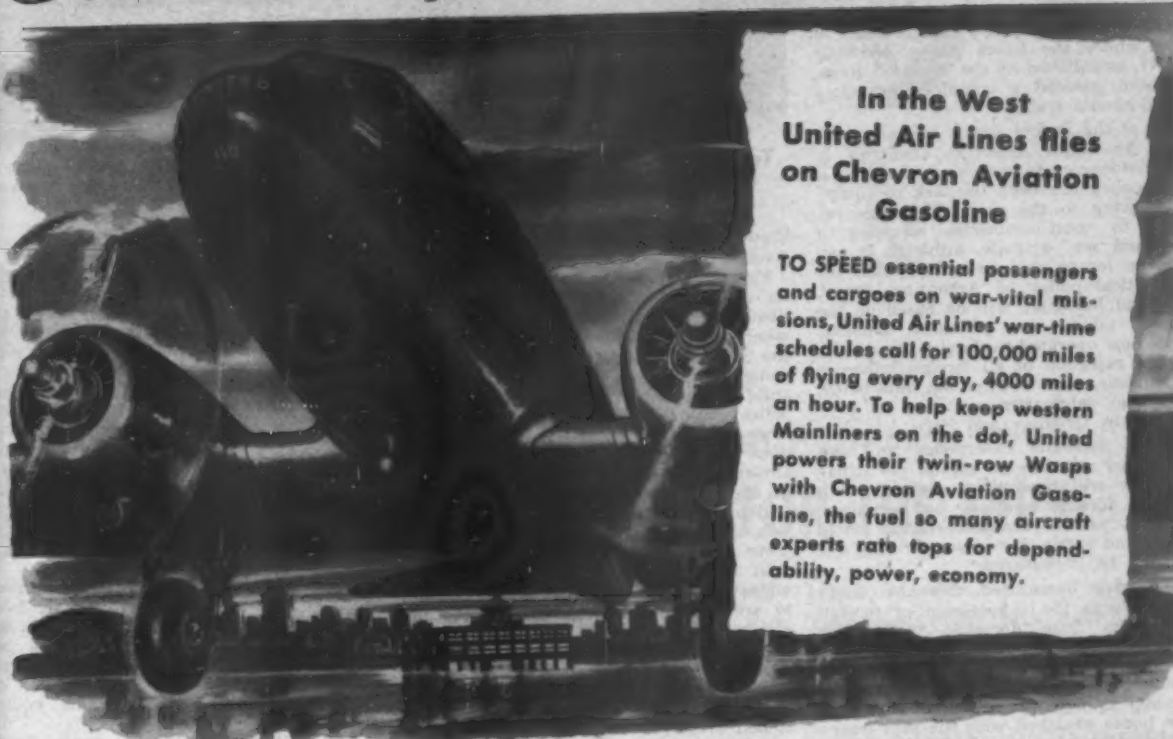
(b) Domestic companies which had survived their "growing pains" and had attained financial stability, with or without Government stability, demanded the elimination of foreign operators from the domestic field and, simultaneously, evinced a growing interest in the creation of relatively short routes to neighboring countries;

(c) Those airlines which had been established by the military as a result of the lack of private enterprise developed into State-owned commercial ventures.

This latter development, of vast importance in the overall aviation picture in South America, brought with it a demand from the military that the State be the sole operator of domestic routes. The military went even further and began studying the possibility of entering into the international field without apparently giving too much thought to the fact that in such a general plan the international routes of their neighbors would also be operated by their respective air forces.

Some three years ago a struggle com-

Stars in the sky.... *United Mainliners*



In the West United Air Lines flies on Chevron Aviation Gasoline

TO SPEED essential passengers and cargoes on war-vital missions, United Air Lines' war-time schedules call for 100,000 miles of flying every day, 4000 miles an hour. To help keep western Mainliners on the dot, United powers their twin-row Wasps with Chevron Aviation Gasoline, the fuel so many aircraft experts rate tops for dependability, power, economy.



POST-WAR SKIES will see fleets of four- and five-mile-a-minute DC-4's and DC-6's flying for United. Low detonation characteristics of Chevron Aviation Gasoline will permit top power output from their big engines. Economy of Chevron Aviation Gasoline will put more flying hours into their 2880-gallon fuel tanks.



CARGOLINERS, DC-3's converted into flying freight cars, speed shipments from coast-to-coast overnight. All-cargo flights are one of many United innovations in the 17 years it has used Standard aviation products.



"COMFORTIZER" to heat or cool Mainliners before take-off is an example of United's careful attention to passenger comfort and operating efficiency. United Air Lines use of dependable flying fuel like Chevron Aviation Gasoline is another.

Standard and United engineers collaborate on flying fuel tests.



AIRLINE CAPTAINS, test pilots, combat fliers say Chevron Aviation Gasoline brings out the best in any aircraft. Try it in your personal plane—Chevron will make it, too, a star in the sky.



menced, and is still in progress, over the air policy to be adopted by the various South American Governments. This struggle, which has precluded the adoption of any definite policy, is especially evident right now in Argentina, and, to a lesser extent, in Brazil and Uruguay. The struggle has ended in Chile where the *Línea Aérea Nacional* (LAN), established by the army air force, has been granted a complete monopoly over domestic traffic.

One of the factors which has most delayed the South American countries in their endeavor to reach a fixed and stable policy has been the lack of equipment owing to the war. This has resulted in most countries adopting a "wait and see" attitude, although it can be taken for granted, even now, that the aeronautical policy of Argentina, Brazil, Chile and Paraguay will be based on the ultimate taking over of those domestic routes now operated by foreign companies and the rejection of all foreign influence on domestic aviation. For the time being, these two tendencies are not so pronounced in Uruguay and Peru.

Future domestic enterprises will not be allowed any foreign capital participation, nor will "mixed" companies with minority foreign holdings be permitted, although "mixed" companies with partly private and partly State-owned funds will probably be encouraged.

When first announced, this new tendency towards the suppression of foreign competition from domestic traffic was greeted with universal approval in the countries concerned and gave rise to great hopes on the part of potential heavy investors in new private enterprises, but these hopes vanished with the appearance on the scene of a new and less tolerant rival—a military sponsored aviation program—which not only clamored for the elimination of foreign influence in the domestic aviation picture but also opposed the entry of native, private capital.

Almost without exception in the countries concerned, the military favored the exclusive operation of all domestic aviation by the army air commands, although in some cases they conceded the creation of "mixed" companies with private and State capital. Referring to the future prospects for enterprises of this latter type, a South American banker said to the author of this article: "Such companies are meant to die—not to live."

The idea that the State alone should operate airlines is due, in a large measure, to the influence of "directed economy" as was practiced in Germany, Japan and Italy, and to some extent in Russia. This conception of State monopoly can also be attributed to a book which was published in the United States under the title of "The Managerial Revolution," and which has been read, marked, learned and inwardly digested by most military groups in South America.

Brazil's future air policy is still being hatched, while the Paraguayan army air command has created an organization known as LATN, which will exercise a complete monopoly over all domestic operations in Paraguay, and which already holds a concession for the establishment of a service to Argentina—to be inaugurated as soon as equipment can be obtained—in exchange for a concession which Paraguay granted the Argentine



Terminal at Belize—This new airport building at Belize, British Honduras, is a regular stop on TACA Airways' international flights between Miami, Havana and Central America.

State-owned LADE for its Buenos Aires-Asuncion route.

Partial State-ownership has even found its way into Uruguay, one of the most democratic nations in South America, where the Government has holdings in the *Sociedad Mixta PLUNA*—a new outcome of the former "PLUNA," which in spite of substantial Government subsidies could not keep going. The marriage of PLUNA and the Uruguayan State does not augur well especially as the Government has put a limit on the profits of the new company, a measure which will probably stunt the growth and progress of the company—a prelude to complete State ownership.

In the face of this new threat, some endeavors were made by private capital to save the existing enterprises. For instance, prior to the fall of the Castillo Government in Argentina, "Aeroposta Argentina" was negotiating with the Government for the creation of a "mixed" company which would be developed until it had a complete monopoly over all domestic aviation in Argentina. The plan failed because of the opposition of the Army Air Command, which flatly refused to surrender the "LASO" line then under its control.

Likewise in Brazil several efforts to form "mixed" companies of a monopolistic nature were stillborn. Violent opposition to such plans is reported to have come from "Cruzeiro do Sul," an enterprise in which the Vargas and Aranha families are reported to have appreciable capital holdings.

A look into the financial position of some of the companies operating the do-

mestic services of South America is a prerequisite to anything like a correct view of the complicated pattern that is in the process of being woven. In the first place, lines under military control must go into a classification of their own, for they are not required—nor do they—publish annual financial statements. Likewise, the finances of many private companies are not always easy to analyze, especially as some of them receive subsidies, which are well kept secrets.

Perhaps the best criterion for shaping an opinion on the financial soundness of some of these companies is a study of their traffic and some of their major expenditures.

It is a noteworthy fact that some operators in South America are paying from \$60,000 to \$120,000 cash for antiquated Junkers JU-52 equipment, whereas between 1934 and 1936 these same companies were unable to pay \$30,000 on long-term credits for the same equipment then brand new.

The subsidies paid by most South American Governments are far in excess of those paid by the United States and other governments. Whereas subsidies paid in the USA and Europe range between 30 and 60 cents per kilometer, some South American Governments are paying subsidies as high as 88 cents per kilometer. In fact, the subsidies received by South American operators in their domestic and international services are conservatively estimated to reach \$3,800,000 (US) annually. With the projected increased activity of these South American lines and augmented Government interest in them, it can safely be assumed that at a not too distant future that sum will appear minuscule.

Even prior to the Chicago Conference held last year, several South American countries had started to form their general aviation policies. Argentina, Brazil, Chile and Paraguay, for instance, had all agreed to reserve to themselves the exclusive right of all domestic travel, whether such domestic services be operated by the State, "mixed" companies or strictly private enterprise. In Uruguay and Peru—and the latter, incidentally, now has its own "Línea Aérea Nacional"—this matter has still to be clarified. As regards international traffic, all these countries have more or less guaranteed free transit. Some, however, want to reserve the right to fix the route to be flown by international operators in traversing their territories on grounds of military security. However, with the advent of giant long-haul craft it is open to question as to whether international airlines will be willing or economically able to follow prescribed routes and land at every frontier.

Three Czech Airman Study U. S. Airlines

Three Czechoslovakian Air Force officers arrived in Washington June 13 on a tour of U. S. domestic airline bases, especially those of United Air Lines and American Airlines who arranged their reception in the capital. The officers—Squadron Leaders Jindrich Kroh and Jaroslav Muzika and Flight Lieutenant Vaclav Zima—have been flying with the Czech wing of the Royal Air Force since their country was occupied in 1939.

Each reported that he had become familiar with such multi-engined planes as the Liberator, York, and DC-3 during the course of the war and that the two commercial Czech lines—Czechoslovakian Air Lines and Czechoslovakian Aviation Co.—were anxious to obtain planes of this type for resumption of operations on the continent.

Curtains for a Carrier: Martin Mariners cripple a Shokaku-class Jap flattop off Leyte.



Wherever Navy airmen strike IT'S TAPS FOR THE JAPS!

NO wonder Navy airmen are bad news to the Nips! With the world's best planes, most complete training, and highest morale, our naval fliers are more than a match for the Mikado's myopic monkeys!

Nipponese Nemesis

The men who fly Martin Mariner patrol bombers, for example, take the worst that the elements or enemy can offer. Bombing enemy subs or surface vessels, flying long-range reconnaissance missions over Jap-held areas, cargo-carrying or evacuating wounded, effecting rescues . . . these are just a few of the vital jobs performed by Martin Mariners and their valiant Navy crews.

Mariners Mean High Morale

Especially important are the "Dumbo" missions flown by the big

24-ton Mariners. Joining carrier-based planes in the thick of the fight, Mariners land, despite stormy seas or enemy fire, to rescue airmen downed in combat. Thus skilled Navy pilots and gunners live to fight another day . . . and morale among carrier-based airmen is kept high. Another reason why the Mariner is a headache for Hirohito!

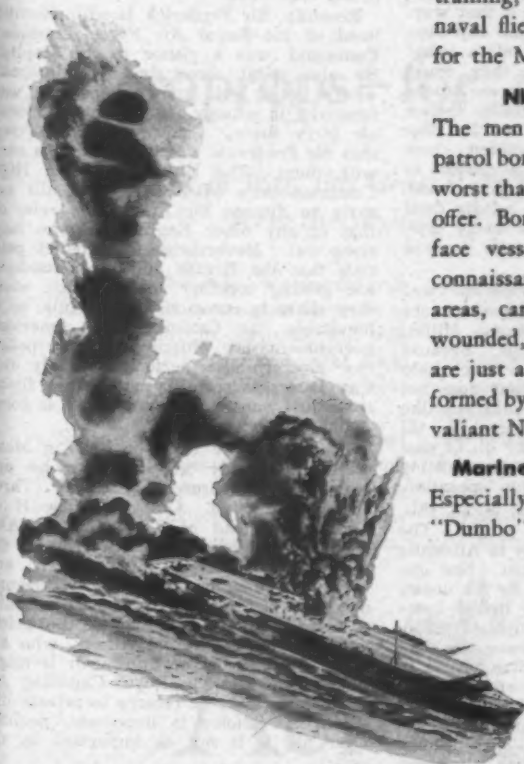
Tomorrow, Too

Remember, the usefulness of these rugged Mariners will not end with the war. Their stout construction, long range and complete dependability make them ideal for tomorrow's overocean airlines. Keep your eye on the Martin Mariner, after Victory! THE GLENN L. MARTIN CO., BALTIMORE 3, MD. THE GLENN L. MARTIN-NEBRASKA CO., OMAHA.

Martin
AIRCRAFT

Builders of Dependable Aircraft Since 1909

HOLD IT, MISTER! Don't cash in those War Bonds! Because each War Bond you cash in *doubles* Uncle Sam's job . . . gives him the dual task of selling bonds to carry on the war and selling bonds to replace those cashed in! Hang on to those War Bonds!



Canada Plans Pacific Operations On Large Scale; May Hit PAA

Regular TCA Flights To Australia Foreseen

By AUSTIN F. CROSS

(American Aviation's Canadian Correspondent)

OTTAWA—Canada has big plans in the Pacific, to take effect after the war. This was learned from J. A. Wilson, Director of Air Services, Transport Department, and veteran in the field of civil aviation. American Aviation called on Wilson, who is just back from Australia and New Zealand. He was for many years Director of Civil Aviation, Department of Transport, and in that capacity knows about as much as anybody else in Canada as to how the Dominion government is likely to operate in the future.

Pan American Airways will be particularly interested, because the Canadian line will both compete with, and cooperate with PAA.

Wilson predicted that the day would not be too far distant, when Trans-Canada Airways would fly planes regularly to Australia. He expected that the Australian airways also would want "a piece" of this service, and thus they would probably alternate the service on a daily or weekly plan. Thus, Mondays, Wednesdays and Fridays might be Canada's, while Tuesdays, Thursdays and Saturdays would belong to Australia. This is just given as an example. Or they might fly every second week.

Vancouver is designed as the northern terminus, Sydney the southern, and the stops are presumed to be San Francisco, Honolulu, Canton Island, and New Zealand. It is understood that Canadian planes would not carry passengers between American points. On the other hand, Pan American would have some taboos, too. It is possible that they would not be allowed to carry passengers between New Zealand and Australia, or say, Australia and Canada. (This could be got around, of which more later.)

The idea however, is to get a 'quid pro quo', inasmuch as Americans are, in effect, invading an Empire service. Also, for the privilege of the Americans coming down at Canton or Fiji, the Canadians would be allowed to come down in Honolulu or San Francisco. It would be understood, of course, that Canadian planes could not carry San Francisco-Honolulu local traffic.

No trouble is seen in dovetailing in the three services—American, Australian, and Canadian. The Canadians do not believe they would have any difficulty either with the Antipodeans or the Yanks.

The Canadians are waiting to get bigger ships, and the hope is that sooner or later they will get Douglasses, or perhaps some kind of super-Douglas. However, the Canadians will gladly start with whatever is available, then shop around later for bigger, more modern planes. It stands to reason that if the big firms can turn out bombers, almost on assembly line scale, that there will be no trouble to

convert their plane construction to civilian needs.

Another feature that appeals to the Canadians is the projected cheapness of the trip. No one has quoted a price yet, but the Canadian and Australian governments may even go to the extent of subsidizing the lines to get cheap, inter-empire communications. In any event, the effort will be made to keep it under the steamship fare. The liners, having to feed people for three weeks in each direction, charged fairly substantial prices in the past for Canadian-Australasian travel tickets.

What Wilson also emphasized was the fact that these plane trips are to be swift. He predicts that they can be done in two days, and speed of course is what Canadians want. The three weeks' voyage on the pre-war Aorangi or Niagara do not appeal now to people of this country, whose taste for speed has been whetted by overnight plane trips to Britain. While it is true that not one Canadian in 10,000 had one, it is nevertheless a fact that Canadians would like to think that if they did go to Australia by plane, they would want to do it very quickly.

American competition rights to Vancouver from Sydney, Australia, is possible, if Pan American wants it that way. For instance, if there was some objection to giving PAA the right to sell a ticket between two British points, they could sell to San Francisco, then use an American coast line plane to Seattle, thence to Vancouver. The chances are that this is just a hypothetical competition, since PAA would probably be just as pleased to handle the American and Australian trade, letting Canada and Australia handle their share of the business. It is freely predicted that there will be enough payload for all, soon.

But Canada wants that Japanese war out of the way first, and any plans are contingent on Hirohito joining Hitler, wherever the latter has gone. Because United States is not asking for much help from Canada in the Pacific war does not mean to say that Canada would not like to do more. Therefore, meanwhile, till the Nipponese are just a nasty bit of past history, Canada is not planning on putting any transpacific air plans into operation.

There is one final thought in all this. Where does Canada intend to go? The chances are that if she can fly to Australia she can fly to the Caribbean. She can also fly to Alaska. She can fly the ocean. But if she flies the ocean, the British companies likely will want to articulate themselves into this service. Hence we shall likely see British and Canadian planes in friendly competition, and even friendlier cooperation, flying out to the ends of the earth. This writer does not propose to set down—even if he could—the ultimate pattern of Canadian, or British, air plans. But American air lines would do well to see how their sturdy northern neighbor is getting along. We up here north of the 49th parallel of latitude are all set to go places. Contact!

Brazilian Air Force School Has Enrollment of 1,756

The Escola Technica de Aviao, a school for the training of personnel of the Brazilian Air Force in the operation, maintenance and repair of military aircraft, now has 1,756 students enrolled and has graduated 700 students since the school's inception Nov. 22, 1943.

The school is operated by J. P. Riddle Company, Miami, under contract to the Brazilian Government. It has more than 215 North American instructors and over one thousand Brazilians on the payroll, and is teaching a total of 22 maintenance and inspection subjects. The school is located at Sao Paulo, Brazil. Riddle is a former partner in the Embury-Riddle School which had war training contracts in the U. S.

Canada Committed To Both Britain And United States

OTTAWA—Canada is giving a lot of attention these days to the Provisional International Civil Aviation Organization which is to have its headquarters in Montreal. With trans-oceanic plans well advanced, and dreams that the Empire might well be our oyster, Canada is anticipating the new setup with considerable interest, if not eagerness.

Recently, Sir Frederick Bowhill, former head of the Royal Air Force Transport Command, was a visitor to the Capital. He also spent some time in Montreal, where he is well known, since he was formerly in charge of the international air ferry there. Ottawa authorities say that Sir Frederick was talking things over with them. The United Kingdom High Commissioner's office say it is still too early to discuss Sir Frederick's role, or that of any other Englishman who may come out. Nevertheless, the belief persists that the British and the Canadians are getting together to see what ideas they share in common. Meanwhile, as is inevitable, the Canadian and American governments are whipping together policy too. Everything is perfectly friendly. But Canada, a small country with lots of flying space just wants to know where it is going—and with whom.

The conference is to be held in Montreal. Somebody will have to be appointed to represent Canada. Three choices are cited. One would be H. J. Symington, head of Trans-Canada Airways, power tycoon, and favorite at the court of Clarence I, King of Air, and Howe. Another could be R. A. C. Henry, chairman of the new Air Transport Board. A third could be any one of the bright young men in External Affairs, who are smart at this sort of thing. Or it might go to some ranking Royal Canadian Air Force man, after he returns to private life. While the choice is important, perhaps after all, it is not as important as the policy.

Generally speaking, the policy is a swing door, opening two ways. One side admits Britain, the other, the United States. We are committed to the Good Neighbor Policy in the air on the one

1
5

a
the
tion,
air-
and
the

ddle
the
than
over
roll,
ance
l is
is a
ddle
acts

es

at-
onal
tion
lon-
ad-
ight
ting
rest,

mer
port
ital.
real,
as
onal
say
over
High
too
or
may
per-
ians
deas
is
ican
picy
But
ying
ing

lon-
ap-
ree
J.
Air-
the
and
nry,
ard.
ight
are
ight
Air
life.
aps
the

s a
side
ited
ood
one

45



Aeroprops—for the busy pace of peace

*Proved in War, this General Motors Propeller will
Serve the Skyways of Tomorrow*

WAR still demands the research, engineering, and production facilities of America's aircraft industries. But with final victory drawing nearer, the world of postwar aviation emerges into view.

Super-transport will arch the miles that separate the cities of the nation, the hemisphere, the world. Planes more luxurious and swift than we have ever known will rise from a multitude of new airports.

An important factor in this future is the new General Motors propeller known as the Aeroprop. The lightness, strength and simplicity that have meant so much in war performance will also be available for modern, peacetime flying. The Aeroprop's ease and economy of maintenance . . . its automatic, constant speed operation . . . its simple unit construction . . . its ribbed-steel hollow blades . . . these and other Aeroproducts engineering

advancements will play their part in flying's busy future.

For aviation, when it turns to peace, can be expected to use the products that have proved their worth in war.



Aeroprop Advantages—Lightness for payload . . . Strength for safety . . . Simplicity for easy service . . . Faster Automatic Pitch Change for flight efficiency . . . Full Feathering for engine protection . . . Engineered for reliability.


Aeroprop

LIGHT • STRONG • RELIABLE

AEROPRODUCTS DIVISION • GENERAL MOTORS CORPORATION • DAYTON, OHIO

Keep them flying—Buy Another War Bond!



"Today I fly an all-metal Commando —
Tomorrow I'll fly my own all-metal **SILVAIRE!**"

ALL-METAL construction, in a plane, pays off in maximum durability . . . precious miles per hour added to air speed . . . and improved economy of operation.

The boys who fly today's all-metal military planes know this. And you, too, should bear it in mind when, some exciting day after Victory, you decide to buy your own personal plane.

On that day, look first to Luscombe — pioneer builders of all-metal personal planes. For Luscombe will offer you a thrilling postwar version of the famed **SILVAIRE**, long known for its ace-high performance, low upkeep, and high resale value.

This sleek all-metal **SILVAIRE** will be an extremely airworthy, safe, family plane. And its price will be most reasonable . . . added reason for you to look to Luscombe when you turn your eyes to the skies. Mail coupon for details.

LUSCOMBE AIRPLANE CORPORATION
TRENTON 7, NEW JERSEY • DALLAS, TEXAS

*Our only job today is war . . . utilizing our experience in all-metal fabrication to provide vital parts and sub-assemblies for some of the United Nations' most famous war planes. When peace returns, we shall add this wartime experience to the knowledge we gained in pioneering all-metal construction, to give you a new **SILVAIRE** even finer than the pre-war plane that proudly bore that name!*

SILVAIRE

AMERICA'S ALL-METAL PERSONAL PLANE
BY LUSCOMBE

LUSCOMBE AIRPLANE CORPORATION, Dept. G-2
Trenton 7, New Jersey

- ☐ Please tell me more about the **SILVAIRE**.
☐ I'm interested in a **SILVAIRE** dealership.

Name _____
Street _____
City _____

JML:es L-48

A m

Plane Shortage Still Plagues Royal Australian Air Force

hand, and a pro-Empire policy on the other. In the latter case, do not read into it the word 'Imperialism.' That does not belong in the dictionary of the present government, fresh from a mandate of the Canadian people. The Liberals will co-operate with Churchill, yes, but go the whole way, no. Thus we'll listen to reason from both sides, still go our own.

However, this is not the spot to outline policy; it has been done by this writer in these columns before. What does need to be stressed is that Canada is getting ready.

Every day Canada's air plans for this international confab at Montreal advance a little. We are making haste slowly. But Canada knows what the score is, and is therefore ready to help anybody any way she can.

Some things have been "finalized", some things left wide open. There is no doubt, however, that Canada eagerly awaits the setting up of this interim aviation organization in Montreal, and already has far advanced plans. In this, as in other things, she counts heavily on United States friendship.

AUSTIN F. CROSS.

THE Royal Australian Air Force has been crippled from the very start of the war by its inability to get needed aircraft, Air Vice-Marshal Jones said in an outspoken talk recently in Melbourne.

"Right up to the present stage it has been quite impossible to get the aircraft we want", he said. "It has been one long struggle.

"We could not get British aircraft because Britain was fighting for her life and could not supply her own needs. We then turned to America. After overcoming very great difficulties we got some Kittyhawks, just in time for the battle of Milne Bay. Even now we can get only those aircraft that other countries have left over. American policy has been for Americans to fly American aircraft wherever possible and only the balance of aircraft manufactured in America is available to other nations.

"American commanders have been against giving the RAAF aircraft because they said we did not have the necessary ground staff. And we have had a struggle to get ground staff because we have been told that we have no aircraft for them to service".

Air Vice-Marshal Jones summarized the results of Australian aircraft production as follows:

Wirraway fighter: Proved no match for Japanese aircraft "but I make no apology for it." It was the best we could do with a nucleus aircraft industry at a time when we were very badly placed for aircraft.

Boomerang fighter: This Australian-designed aircraft did not live up to expectations. It is still used for low level tactical reconnaissance but it could not be classified as an interceptor-fighter.

Beaufort bomber: Employed consistently as a general reconnaissance bomber. Has very definitely justified itself, although now obsolete.

Beaufighter: Long-range fighter. Now in production.

Moosehunter bomber: Very great difficulties have been encountered and production has been disappointing, but we are now getting some units into the field.

Mustang fighter: Still the best fighter in the world and will follow the Wirraway and Boomerang from the factories of the Commonwealth Aircraft Corp.

Lancaster four-engined bomber: Will follow the Beaufighter on production lines. This program has been criticized but it is simply justified as a long-term policy. Australian Lancasters may not be completed in time to operate in this war but the heavy bomber is the only type of aircraft which has not yet been built in Australia.

PAA to Resume in Pacific

Commercial air transportation services across the Pacific may be resumed by Pan American World Airways by Jan. 1, 1946, if not earlier, according to an announcement by L. C. Reynolds, manager, Pacific Alaska Division. The Pacific services to the Philippines and Australasia were suspended at the time of Pearl Harbor. Since then the company's entire Pacific facilities and organization have been devoted to military operations under contract to the Naval Air Transport Service.

Foreign Airline Operators Need American Planes, State Department Informs WPB

IT IS ESSENTIAL that foreign airline operators be permitted to obtain new transport planes from American manufacturers, the State Department declares in a statement recently presented to the Aircraft Division of the War Production Board. The State Dept. is asking that WPB amend its Preference Rating Order P-47a, which gives priority assistance to manufacturers producing transport planes for domestic airlines, to include foreign airlines.

The number of planes needed by foreign airlines is restricted. Informed WPB sources state that the claim of essentiality seems well merited in view of our national policy for furthering the war effort, providing transportation for countries directly supporting the war and aiding in the relief and rehabilitation of former German-occupied countries.

After studying the State Department report, members of the Aircraft Division plan to confer with Lincoln Gordon, WPB's Program Vice Chairman, on such matters as the availability of materials necessary to fill the orders. If approval should be granted to the request that Order P-47a be amended to permit foreign airlines to obtain new transport planes the procedure would be the same as that provided for American airlines. Priority assistance would be provided for obtaining scarce materials but the orders would be unscheduled.

Now that P-47a is operating smoothly, Aircraft Division directors believe its operation can be handled by very few people and that need for the continuation of their division will disappear within a few months. Once the planned change from the complicated Controlled Materials Plan to a simplified system of military (MM) and essential civilian (CC) ratings which would function automatically is brought about by the open-ending of CMP, the Aircraft Division believes its job will be over.

"We were set up to do a job outside

the jurisdiction of the military," one administrator told American Aviation. "We were organized to relax controls so that the industry could be on its own to make use of available capacity in civilian production whenever it existed. With the revocation of Order L-48 and the setting up of P-47a we have practically completed our task."

Informed government sources believe that the Aircraft Division and many similar industry divisions of WPB will be able to dissolve by late summer or early fall. Many divisions are now drafting plans which will permit a handful of men to carry on the work necessary until the expected open-ending of CMP.

AMEX Appoints Agent

Appointment of Furness, Withy Company, Ltd. as agents in Newfoundland for American Export Airlines has been announced by W. S. Green, manager, Passenger-Cargo Department of the airline. The new agent maintains offices at St. John's, Newfoundland, with a sub-agent, Bowaters, at Corner Brook.

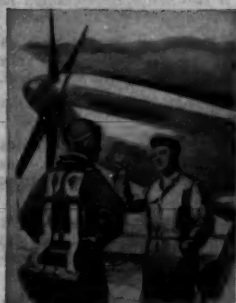
BOAC's Five-Year Record

In the five years ended March 31, 1945, aircraft of British Overseas Airways Corp. have flown more than 35,000,000 miles and carried over 271,000 passengers, over 55,000 miles of routes. BOAC now has over 150 airplanes in service, including 42 flying boats, and employs 20,000 persons. The five-year record is:

	1940-41	1941-42	1942-43	1943-44	1944-45 (provisional)	Total	Increase 1944-45 (1940-41 = 100)
Capacity ton-miles ..	8,375,290	14,925,261	24,272,911	31,353,422	52,831,095	131,757,979	530.3
Total load, ton-miles (paying)	6,290,944	11,115,961	19,558,103	25,164,416	38,949,493	101,079,117	519.1
Passenger ton-miles ..	3,345,046	6,018,753	10,352,067	12,280,553	19,125,899	51,123,108	571.4
Cargo ton-miles	2,161,701	3,588,872	4,525,477	7,791,454	13,527,532	31,595,036	525.8
Mail ton-miles	783,397	1,508,336	4,680,559	5,092,409	6,296,272	19,360,973	703.7
Passenger miles flown	33,993,795	61,150,530	105,177,000	124,770,418	194,319,032	519,410,775	471.6
Passengers carried ..	19,834	29,234	49,928	72,614	99,500	271,110	401.7
Cargo carried, lb.	1,003,520	1,509,760	4,379,200	9,076,480	13,137,600	29,106,540	1209.2
Mail carried, lb.	1,500,000	2,649,920	3,610,080	4,889,920	6,077,280	18,748,800	304.3
Service aircraft mile- age flown	4,874,054	6,978,137	10,550,507	13,064,710	19,931,426	55,398,834	308.9
Service aircraft hour flown	34,085	48,189	69,929	84,895	125,379	362,477	267.8

This advertisement is one of a series now appearing in national magazines and newspapers as Consolidated Vultee's contribution toward a clearer public understanding of how and why America must retain its present Air Supremacy, even after Victory.

THE JOKER IN AIR POWER



EVERY PILOT who wings his Liberator or Fortress over Germany or Japan knows what the joker in Air Power is.

Every ground crewman whose job is to keep a Mustang, Thunderbolt, or Corsair in hair-trigger fighting trim knows what it is.

Every aircraft engineer who ever saw the inside of a wind tunnel knows what it is.

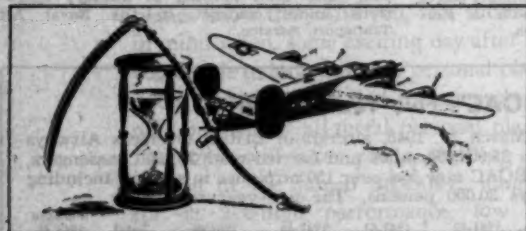
Do you know the joker in Air Power?

It's very important that you should. For, partly because America forgot it during the prewar years, we came terribly close to losing this war right at the start.

But now we are winning the war, largely because a few far-sighted men knew what the joker in Air Power was.

So simple—so easy to forget

The **Joker in Air Power** is **TIME**—the heart-breaking months and years it takes to design, to build, and to perfect a plane to the point where it becomes an efficient, service-tested battle plane, ready for action.



For example, America's first four-engine, long-range bomber was born back in 1934.

But when war was declared, some 7 years later, this bomber was not even *then* ready to go into action as the potent fighting weapon it is today.

True, the first model was flown in the summer of 1935. The aircraft engineers knew then that the basic design was good.

But between the first "prototype" and the current model, there have been more than 4000 changes, involving over 4 million engineering hours.

Even by working with desperate speed, it has taken years to smooth out the "bugs"—to give our Air Forces this heavy long-range bomber, so urgently needed, in its most efficient form.



There aren't many short cuts

When the war clouds grew blacker over Europe, the U. S. Army Air Forces came to Consolidated Vultee with the request for still another four-engine heavy bomber.

Shortly afterward—in 1939—the B-24 Liberator was born.

But, even with Consolidated Vultee's long experience in building mammoth sea planes, it took over 3 years, over 1 million engineering hours, and more than 5 million hours to tool up the plants, before the Liberator was ready to go into action as one of America's most devastating, heavy bombardment weapons.

Similarly, it took 5 years to develop one of this war's foremost fighter planes from drawing board to final test flight and mass production.

And one of the country's greatest aircraft engines has taken

11 years to develop—and ever since the war started, it's been undergoing change after change to increase its horsepower still more.



America 1941—a second-rate power

Many other examples could be cited. But there is no need to labor the point.

The truth of the matter is that America was caught napping. The nation which invented the airplane was woefully unprepared to defend itself against Axis air power. We had become a second-rate power in the air.

And the Axis knew it. They knew that under normal conditions, it takes from 3 to 7 years for a plane to progress from drawing board to combat duty.

What they overlooked was the undreamed-of capacity of the American people, and the American aircraft industry, to do the impossible.

Starting almost from scratch, we have been able to design, build, and deliver war planes by the tens of thousands—an air armada overwhelming in its might and superiority, *as of today*. But remember, the elapsed time has been *five years!*

"Hot" today—obsolete tomorrow

But in aerial warfare, the nation that depends on mere quantity and present-day superiority of its planes cannot win. That is one reason why Germany lost the Battle of Britain in 1940.

Progress in aeronautics is now so rapid that today's "hot-test" combat plane is virtually obsolete tomorrow. Its quality must constantly be improved—to keep it superior to the enemy's ever-improving planes.

And it must be replaced, with all possible speed, by new planes now on our drafting boards, in our wind tunnels, or undergoing their test flights.

These are facts which an alert America should not, must not, forget.

Another fact to keep in mind

If we are attacked again, there will probably be no warning whatever—no time to prepare.

There will be no other nation to hold off the enemy, as Britain did this time, while we frantically build up our power in the air.

And the attack will most certainly be made with new and even more terrible airborne weapons.

We must be ready, and able, to protect ourselves from such attack.

Air Supremacy alone cannot win a war, and may not in itself prevent another war. But as long as we maintain our strength in the air, no aggressor nation in its right mind will dare think of attacking us.

Air Power is Peace Power

The backbone of Air Supremacy is a strong, independent competitive aircraft industry, constantly working in research, in the improvement of production technique, and in the development of still finer planes.

But we must understand that Air Power is a combination of *all these things*: a postwar Air Force, commercial air transport, a strong supporting aircraft industry with permanent facilities to meet any emergency, widespread personal flying, and a national air-minded way of thinking.

When we understand this, we begin to realize that Air Power can be one of America's soundest investments in the interests of a lasting peace.

**LET'S KEEP AMERICA STRONG
IN THE AIR!**

CONSOLIDATED VULTEE AIRCRAFT CORPORATION

San Diego, Calif.
Vulcan Field, Calif.
Fairfield, Calif.

Tucson, Ariz.
Fort Worth, Texas
New Orleans, La.

Nashville, Tenn.
Louisville, Ky.
Wayne, Mich.

Dearborn, Mich.
Allentown, Pa.
Elizabeth City, N.C.

Miami, Fla.
Muskogee, Okla.
War Production Council



CAB's Ideas on Multiple Taxes Incorporated in Bulwinkle Bill

Allocation Formulae for Apportionment Set Up

A BILL to alleviate multiple taxation of the domestic airlines by the states was introduced last fortnight by Rep. Alfred L. Bulwinkle (D., N.C.). The legislation follows the recommendations of the Civil Aeronautics Board in its recent report to Congress on the multiple taxation problem.

The Bulwinkle bill sets up allocation formulae for the apportionment among the states of taxes on operating property, operating revenues, or capital stock, and for taxes on net income, and would make it unlawful for the states to impose such taxes.

Named as the administrative agency to carry out the bill's provisions was the CAB. The Board would be assisted by a five-member advisory committee, at least three of whom shall be state or local tax officials. Members of the advisory committee would serve for five-year staggered terms.

The bill provides that on or before April 1, 1946, and at least once a year thereafter, the CAB shall determine for each air carrier the allocation fractions applicable to each of the taxes designated. These allocation fractions will then be certified to the carriers and to the governors of the several states in which the carriers operate, after opportunity for hearing.

The bill also followed the Board's recommendations in prohibiting the states from leveling a license or registration fee against airmen "operating, or taking part in the operation of, aircraft engaged in interstate or foreign commerce." It also prohibits the necessity for having to obtain state airmen's licenses.

The Board in its report to Congress criticized the state taxation of aviation gasoline, and Bulwinkle's bill followed the Board's recommendations that the Secretary of the Treasury institute a study looking toward the removal of "impediments, inherent in state taxation of aviation fuel used in interstate commerce." The Treasury's recommendations are to be made to Congress within 12 months, following consultations with governors and fiscal authorities of the states.

"I feel that this proposed legislation represents a long stride in the solution of the problem of multiple taxation of air commerce," Bulwinkle said. "I am confident that a federal statute can be written and enacted which, while requiring air carriers to pay their fair share of state and local taxes, will remove the danger of multiple taxation which might well cripple the development of the national air transport system."

Bulwinkle said he expected hearings to be held on the bill shortly after the conclusion of Congress' summer recess.

Amendment Provides CAB Full Authority Over 'Air Navigation'

Rep. Clarence F. Lea (D., Calif.) has introduced an amendment to the Civil Aeronautics Act of 1938 which would give the Civil Aeronautics Board blanket authority over the regulation of "air navigation," as opposed to the present jurisdiction over "interstate, overseas or foreign air commerce." The bill (HR 3383) was referred to the House Interstate Commerce Committee, of which Lea is chairman.

The amendment would give the CAB specific authority over intra-state air commerce by providing for jurisdiction over "local traffic," which was defined to mean passengers or property moving wholly within a state or within any area in the U. S., "whether wholly by aircraft or partly by aircraft and partly by other forms of transportation."

The amendment would substitute the term "domestic air transportation" for the present "interstate air transportation." Domestic air transportation is defined to mean "the carriage by aircraft of persons or property as a common carrier for compensation or hire or the carriage of mail by aircraft, in commerce between a place in the United States and any other place in the United States . . ."

The amendment also provides for enforcement of the regulations in local courts by state enforcement officers and provides that civil penalties imposed under the act would go to the state rather



Turns Art Critic—During a recent appearance before the House Interstate and Foreign Commerce Committee in Washington, Col. Roscoe Turner, president of the National Aviation Trades Association, observed that a Rockwell Kent mural on the wall featured airplanes flying above a rolling landscape. The fact that the artist had omitted a landing field from the panoramic view so disturbed Turner that he left his place before the committee's rostrum, borrowed a gavel from Representative Alfred L. Bulwinkle, who was presiding, and pointed to "where I would have pointed in an airport, had I been Rockwell Kent." Rep. Bulwinkle is seated at left and Rep. Charles A. Wolverton at right.

than the federal government. The CAB and the CAA would be authorized to confer with representatives of the several states and other local authorities in the interests of sound jurisdictional procedure.

Also provided for is a uniform system of regulations under the direct approval of Congress. "No other regulation of air carriers or foreign air carriers shall be imposed or enforced in a manner which hinders, burdens, or interferes with the conduct of air navigation among the several states . . . or to or from foreign nations which impairs uniformity in the conditions under which such air navigation is conducted, unless provided for or consented to by the Congress."

House Approves May Bill For NAS Research Board

The House has passed the May bill (H.R. 3440) which authorizes the appropriation of \$8,000,000 annually for the establishment, within the National Academy of Sciences, of a research board for national security.

The board would be composed of 20 representatives of the military and 20 civilian scientists. A working committee of five composed of a high ranking officer from both the War and Navy departments and three civilian scientists, would be established. The chairman of the committee would be chosen from the civilian personnel on the committee.

One of the members of the board, and undoubtedly also of the working committee, is expected to be the director of the National Advisory Committee for Aeronautics. Research in the field of aviation would have an important part in the board's peacetime activities.

Allocation Formulae on Airline Taxes

Here are the allocation formulae on airline taxes as proposed by the Bulwinkle bill. In each instance the formula is based on three factors, weighted as follows:

For taxes on operating property, operating revenues or capital stock: (1) the sum of the carrier's passenger, freight and express tonnage originating and terminating within the state, divided by twice the total passenger, freight, and express tonnage carried, with a weight factor of two; (2) the sum of the carrier's passenger, freight and express revenues originating in the state, divided by its total operating passenger, freight and express revenues, with a weight of two; and (3) scheduled arrivals and departures within a state, divided by the total equated scheduled aircraft arrivals and departures, with a weight of one.

For taxes on net income: The first two factors and weights are the same as (1) and (2) above, plus (3) wage and salary payments to persons employed by the carrier within a state (exclusive of flight crews), divided by its total wage and salary payments (exclusive of flight crews), with a weight of one.

WESTERN AIR

"On Target"



-As America's Power Surges West

As the full power of Uncle Sam's military might—men, planes, ships, tanks, guns, bombs—is thrown in mounting fury at the Jap, Western Air Lines fleet of air transports is "on target." Its 4196-mile network of strategic routes is geared up to moving essential passengers, mail, and cargo to the Pacific, speeding them to battle zones beyond.

Since 1926 Western has pioneered and flown the airways that serve the West. Into four years of wartime flying it has crammed many more years of experience, including 10,000,000 miles in Canada and Alaska for Air Transport Command. Western's knowledge of the West and its experience will add comfort, safety, and speed to your air travel for business... and for fun... when complete Peace comes.

General traffic office: 510 W. Sixth Street, Los Angeles 14



WESTERN AIR LINES
AMERICA'S PIONEER AIRLINE

ALPA for Controlled Competition, Says Behncke's Letter to Bailey

Monopoly Would 'Beat Down Wages' is Claim

THE Air Line Pilots Association has gone on record as strongly opposed to a single international airline company for the United States, and believes that controlled competition should be the national policy followed.

The views were expressed by David L. Behncke, president of ALPA, in a letter dated May 5 to Senator Josiah W. Bailey (D., N. C.), chairman of the Senate Committee which has been considering the McCarran All-American Flag Line Bill (S. 326) which would create a single community monopoly company for international air transport. The letter was revealed when the hearings were published June 9.

Behncke said a monopoly company would "beat down wage levels", and answered the argument that lower wage standards in foreign countries would put U. S. lines at a disadvantage by saying that a single company would have to combat this differential the same as a number of companies would have to do.

Salient points in Behncke's letter are:

"In view of the fact that Pan American Airways is the principal advocate of the so-called single instrument overseas intercontinental air-line operating plan and to avoid unnecessary controversy, although we legally represent all the Pan American pilots, I choose not to speak for them on this issue. I have talked to many of them and I am convinced that a certain number are, due to loyalty to their company, in favor of the so-called single instrument international air-line operating plan; some prefer to remain silent, while others are against the single instrument proposal and are not hesitant about making their thoughts known. I am firmly convinced that by and large all but a very small percentage of air-line pilots in this country, who are the first line pioneers of America's continental and intercontinental air-line network, which has no equal in all the world, are against the so-called single instrument proposal or anything that bears any monopolistic leanings, tendencies, or ties whatsoever. Our country's air-line pilots are overwhelmingly for the controlled competition method of developing and carrying on our international air-line activities much along the same lines as our vast domestic air-line network has been developed and operated so successfully for so many years.

No Pan Am Contract

"It is interesting to note that the only air line with which the Air Line Pilots Association does not have a pilots' employment agreement, negotiated pursuant to the Railway Labor Act, as amended, is Pan American Airways, the principal advocate of the single instrument proposal. Such an agreement has been in negotiation ever since January 31, 1944, but is still not completed and signed. It is currently in the hands of the National Mediation Board where it was placed on November 27, 1944, with a request for assistance . . .

"As the representative of the key personnel who are actually doing our overseas and intercontinental flying, operating internationally, it is our desire to go on record as unalterably opposed to any policy which will provide a monopoly, or any chance of a monopoly, by congressional action to any one air-line company. Rather, we prefer to go along with the time-tried American com-

petitive methods of doing business, and are firmly convinced that our foreign air-line policy should definitely be one of controlled competition rather than any single instrument or any other form of monopolistic idea . . .

"What has brought all this about? What has been its principal stimulus? Controlled competition is that stimulus. Controlled competition has prevented economic and technical lethargy, so fatal to any industry, particularly one as new and dynamic as air transportation. Should we tie down and strangle the development of one of our most promising fields of endeavor—international air transportation—which, if given half a chance, will become the vastest and most extensive ever to become available to us, by placing it, through congressional action, into a one-company international monopoly? The question answers itself with a loud 'No'.

"There has been considerable testimony in the hearing before your committee on S. 326 to the effect that the reason why monopoly is necessary in the international field is that the difference in the wage scales and standards of living of the United States and foreign countries will place a United States company or companies in the international air transportation field at an economic disadvantage. Obviously, these sorts of feeble attempts at scare statements are, to begin with, basically selfish and, secondly, they are distinctly the 'ghost-in-the-graveyard-at-midnight' type of propaganda. Where this sort of argument falls short is that the monopoly will not eliminate the alleged disparity between wage levels since a monopolistic company would be subject to the same salary differentials as would competing companies. What a monopolistic company can be depended upon to do is to drive down the wage levels of American workers not because of any desire to help our country's international air-line transport development but to increase the profits of their enterprise. There is no more effective weapon that can be laid in the hands of any company against their people who toil for a living than the awful octopus of monopoly with its innumerable and entwining tentacles.

Dangers of Monopoly

"Any ills which may be developed in a controlled competition industry can be easily coped with but, once a monopoly takes hold, it soon becomes so strong that it is practically impossible for even a government as strong as ours to cope with its powers. It takes but a short time for a strong monopoly to embed itself so strongly in all forms of American life, economy, and Government that it is practically impossible to uproot or even properly control. The air-line pilots say it shall not happen in any form of our air-line transportation, whether it be a continental or international operation.

"Obviously, the real intent of any monopolistic set-up, plan, or arrangement in international air-line transportation is primarily designed to beat down wage levels—hammer wage levels down to the level of the other fellow. That is one of its principal inherent purposes. The very nature of such an arrangement can work to no other purpose or to no other end. A number of air-line companies operating under a properly established system of controlled competition in the international field will operate in exactly the opposite direction and will tend to raise salaries and keep the economics of the business in a solvent and fluid state. On the other hand, a monopolistic set-up, such as the single instrument plan, will have a tendency to freeze and tear down wage levels not only in our own country but in other countries as well. Everything considered, it doesn't have the true ring of Americanism—the true ring of real leadership so necessary in international

flying development. The general idea should be to bring the other fellow up to our level and to raise our standards of air-line operation and piloting technique; increase the safety factor; give the working people a raise now and then when they deserve it; make it a worthwhile American plan enterprise all the way through. Don't freeze and paralyze it by clamping it into a closed-door monopoly vise such as is being proposed.

"The members of your committee have heard the testimony of Mr. H. W. Brown, president of the International Association of Machinists, who, strangely enough, endorses the single-instrument proposal in our international air-line aviation. Such a stand is both surprising and amazing because what benefit could labor possibly derive from anything monopolistic in character? Nothing but headaches and regrets could possibly be the crop, sooner or later, reaped from such a short-sighted labor policy. It goes without saying that anything monopolistic, in any sense whatsoever, is not in the best interest of American labor regardless of what anyone says or why they say it. Inasmuch as S. 326, which is being considered by your committee, is of more vital importance to employees in the air-line transportation industry and, obviously, is of far more importance to them than any other labor group, we believe it would be pertinent to observe that according to the tenth annual report of the National Mediation Board for the fiscal year ending June 30, 1944, the latest report of this Federal agency, page 40, table 14C, the International Association of Machinists, Mr. Brown's organization, represents only the stewards and stewardesses and the mechanics of two of the five divisions of Pan American Airways and the mechanics of Eastern Air Lines, a very small proportion of air-line labor. The National Mediation Board, which is the official certifying agency for labor for representation purposes in the air-line industry, does not list Mr. Brown's organization as having been recognized as the representative of the labor of any other air-line transportation company . . .

Labor Policy Unsatisfactory

"Pan American Airways has been mentioned many times in these hearings. It has been held out as a model to show what can be done under a monopolistic set-up. This company admits it is a monopoly; it has no qualms about such things. From our first-hand knowledge and contacts with Pan American Airways, we can state, unequivocally, that as a result of the monopolistic position of this company in international air-line aviation transportation prior to World War II, its labor policy was far from satisfactory and left much to be desired. This unsatisfactory employer-employee policy stems from its monopolistic tendency and position. Were it not for the existence of certain protective Federal statutes which Congress in its wisdom saw fit to enact in 1938, and prior thereto, the airline pilots have every reason to believe that the standards, pay, and other working conditions on Pan American Airways, especially for the pilots, would be far lower than they are today. Pan American Airways had no competition—why should they desire to improve their employees' status.

"As the air-line pilots view the single instrument proposal being sponsored by Pan American Airways, it is a bid to further secure and irrevocably establish this monopolistic international air-line operating hypocrisy by congressional action . . .

House Approves Vinson Bill

The House has passed and sent to the Senate the measure introduced by Rep. Carl Vinson (D., Ga.), H. R. 3180. This legislation gives Congress veto power over the postwar sale of several hundred Navy owned or operated plants, including aircraft plants, and a 60 day period in which to disapprove a proposed transaction. No complete figures have been presented as to the total valuation of surplus plants thus withdrawn from the jurisdiction of the SPB, but combined Army and Navy plant valuations will run into several billions of dollars.

a should
our level
the oper-
case the
a raise
t; make
prise all
paralyze
monopoly

ve heard
resident
echinists,
single-
nal air-
surprising
ld labor
opolistic
and re-
ener or
ed labor
anything
is not
regard-
y say it.
nsidered
ortance
ition in-
ore im-
r group.
observe
port of
ne fiscal
t report
14C, the
sts, Mr.
ne stew-
anics of
merican
ern Air
air-line
which
labor for
line in-
nization
presenta-
e trans-

entioned
as been
an be
is com-
has no
r first-
Ameri-
vocally,
position
ne avia-
r II, its
and left
ory em-
its mo-
e it not
Federal
aw at
e airline
that the
nditions
for the
are no
compet-
ve their

ngle in-
by Pan
r secure
istic in-
rity by

Senate
Vinson
n gives
sale of
operated
60 day
proposed
ve been
of sur-
juris-
my and
several



Finish the Fight—with War Bonds

"Ground Flight" of a Boeing Superfortress

You're looking at one of the world's strangest laboratories . . . hidden in a closely guarded corner of Boeing's huge Seattle plant. It's a one-room house alongside a large steel frame in which an engine and a section of wing are firmly anchored. House, frame and engine can all be revolved on a circular track.

Designed by Boeing engineers, it is capable of testing the characteristics of the most advanced power-plant installations planned for great warplanes and transports of the future! The picture above was taken when the Boeing B-29 Superfortress—which is now being flown so valiantly by Army Air Force crews in Japanese skies—was still in the development stage.

Hour after hour, week after week, the 2200-hp. engine roared and tugged at its captive wing section. Inside the little laboratory the test crew watched a battery of instruments. They were testing the functioning of the power-plant with its many services and accessories at various engine speeds and powers—finding out how a new nacelle design affected their operation.

The B-29 nacelles offered Boeing engineers a particularly tough problem. Each one had to be big enough to accommodate a huge, complicated radial engine, dual turbo-superchargers, three separate cooling systems, intake and exhaust systems, electrical and ignition systems and fuel lines—besides the

retractable landing gear housed in the inboard nacelles. Yet, aerodynamically, each had to be slim and compact, to reduce drag to a minimum, for the B-29 was to be a bomber with the speed of a pursuit ship.

The long bombing missions flown by the Superfortresses, through every variation of climate and temperature, are striking testimony to the success of Boeing engineers in solving this and other problems.

Sound research, design, engineering and manufacture have always gone into every Boeing product . . . one reason why you can depend on peacetime aircraft of the future, "Built by Boeing" to lead the way.

DESIGNERS OF THE B-29 SUPERFORTRESS • THE FLYING FORTRESS • THE NEW STRATOCRUISER
THE KAYDET TRAINER • THE STRATOLINER • PAN AMERICAN CLIPPERS

BOEING

Bill Provides Southern Firm Be Reimbursed for WTS Loss

Sen. Elmer Thomas (D., Okla.) has introduced in the Senate a bill to reimburse Southern Aviation, of Oklahoma City, Okla., \$80,388.16 for losses sustained in carrying on the cadet indoctrination flight courses under the War Training Service program.

The bill is for the relief of George A. Hales, doing business as Southern Aviation, and the \$80,388.16 is said to represent losses sustained in the performance of the contract as well as losses incurred through termination of the contract.

Counsel for Southern Aviation said that the aviation schools had "lost their shirts" in the cross country phase of the program but that CAA had renegotiated the contracts and revised pay schedules upward but had refused to make a similar adjustment in connection with the Cadet Indoctrination Flight program. Hence the issue is being taken to Congress.

Military, Naval Air Schools Provided for in Two Bills

Two bills calling for establishment of U. S. military and naval aviation academies have been introduced in the House by Rep. James G. Fulton (R., Pa.). Regulations governing the two schools would be the same as those presently applying to the U. S. Naval Academy and West Point.

The bills provide that the aviation schools would graduate their men with officers' ratings in the respective services. Cadets and midshipmen would be admitted to the academies under the same terms and conditions as those provided for Annapolis and West Point.

The bill for establishment of the naval aviation academy (H. R. 3404) was referred to the Naval Affairs Committee, and the other (H. R. 3405) to the Military Affairs Committee.

House Votes to Extend Renegotiation Act 6 Mos.

The House has voted to repeal the repricing title of the Revenue Act of 1943, effective Dec. 31, 1945, and to extend the Renegotiation Act for six months from June 30 to Dec. 31, 1945. Rep. Church (R., Ill.) was voted down on two proposals to amend the bill (H. R. 3395). One proposal was to terminate renegotiation of all contracts made subsequent to Dec. 31, 1944, and the other was to have the repricing provisions repealed effective on passage of the bill, instead of next Dec. 31. The bill has gone to the Senate for hearings before the Finance Committee.

Opposes Air Commission

The state-wide Florida Aviation Committee will recommend that Gov. Millard Caldwell act against the establishment of a separate State Aviation Commission and instead appoint an Aviation Director within the Florida State Improvement Commission, which may be made available after the war for aviation purposes, it is reported. The Committee also will urge that the present Airport Zoning Law be re-enacted to comply with CAA's standards and recommendations for such laws.

Library of Congress Expert Becomes CAA Librarian

Arthur G. Renstrom, since 1935 senior assistant in the division of aeronautics



Renstrom

of the Library of Congress, has been appointed librarian of the Civil Aeronautics Administration, succeeding Clara S. Haupt. He is well known in aviation circles as a compiler and editor of many aeronautical bibliographies.

U. S. Chamber Referendum Proposes Independent CAA

A Chamber of Commerce of the United States referendum, circulated to member chambers to form the basis for the Chamber's policy on postwar expansion in domestic aviation, carries a recommendation that the Civil Aeronautics Administration should be established as an independent agency of the Government. The CAA will have substantially its present responsibilities and powers and will make separate investigations of air accidents.

Responses to this referendum are due at the national headquarters of the Chamber on or before July 12. In addition to civil aviation, some 35 other subjects, covering practically all phases of the country's domestic economy and some foreign policy, are covered in the referendum.

The referendum on civil aviation is based on recommendations of the Chamber's Transportation and Communication Department Committee, headed by Powell C. Groner, president, Kansas City Public Service Co., Kansas City, Mo. The committee includes airline presidents, Jack Frye, of TWA, and W. A. Patterson, of United, as well as leading executives from all fields of aviation.

Meteorological Stations Bill Is Accorded Strong Support

The Departments of State and Commerce and the Civil Aeronautics Board have submitted favorable reports to the Senate Commerce Committee on S. 765—a bill introduced by Sen. Owen Brewster (R., Me.) which calls for the establishment of meteorological observation stations in the arctic region and the Western Hemisphere.

Henry A. Wallace, secretary of Commerce, said that the Commerce department recommends passage of this proposed enabling legislation as it is highly important in the future development of international air transport routes and in the forecasting of cold waves, blizzards and severe storms in the United States.

5 Surplus Transports Allocated

The Surplus Property Board announces its 13th allocation of five surplus transport aircraft June 11. All of the planes were DC-3s. American and United Air Lines were allocated one each of DC-3s in the U. S., and three went to DDL, the Danish Airline. The latter aircraft are in Europe.

Geuting Clarifies ACCA's Views on Airpark Costs

The Personal Aircraft Council of the Aeronautical Chamber of Commerce has supplemented its recent testimony before the House Interstate and Foreign Commerce Committee with an assertion that the cost of constructing airparks would not be comparable to that of constructing airports for continental and inter-continental air traffic. Some airparks would cost less, some more, the council said.

The supplemental testimony was contained in a letter to Rep. Charles A. Wolverton (Rep., N. J.) from Joseph T. Geuting, Jr., council manager. Geuting said the letter was written to clarify the council's recommendations, particularly with reference to the cost and number of small airfields required to properly develop personal flying.

Geuting said that it was the council's position that every community in the U. S. be afforded the opportunity to share in whatever federal aid funds are made available. He reiterated that the average expenditure for each landing facility would be \$20,000 under a community-federal matching program, but that that figure represented only an average and not the actual expenditure for each facility.

Special Subcommittee Named To Redraft Airport Bill

The Aviation subcommittee of the House Interstate and Foreign Commerce Committee on June 19, in executive session, named a special subcommittee to do the actual re-drafting of the Federal Aid Airport bill—H. R. 3170. The subcommittee is composed of Alfred L. Bulwinkle (D., N. C.), Clarence F. Lea (D., Calif.), J. Percy Priest (D., Tenn.), Charles A. Halleck (R., Ind.), and Carl Hinshaw (R., Calif.). It is understood that the full subcommittee has agreed on general policy and that the actual work of phrasing the bill will be left to the smaller committee.

Oppose California Commission

Both the Bay Area Aviation Committee and the Board of Directors of the San Francisco Chamber of Commerce adopted a resolution last week opposing the creation of a California state aviation commission at this time.

In the resolution forwarded to the state legislature, it was pointed out that federal control of aviation has proven satisfactory and adequate; that aircraft utilizes a universal substance and aviation cannot be limited by state boundaries, but must be developed into an instrument of the greatest good for the greatest number of people.

Wants Independent Air Agency

Rep. Charles A. Halleck (R., Ind.) has introduced a bill (H. R. 3423) calling for the re-establishment of the Civil Aeronautics Board and the Civil Aeronautics Administration as an independent agency to be known as the Civil Aeronautics Authority. The bill was referred to the Interstate and Foreign Commerce Committee.

Japanese Air Force Reported Greatly Weakened

Number of Planes in Combat About 4,000

THE JAPANESE air force has been so weakened that it is unable to mount adequate strength at all critical points of its defense area, the Office of War Information has reported on the basis of War and Navy department material.

The total number of Jap planes now assigned to combat is believed to be approximately 4,000 in contrast to a much larger strength by our Navy and Army. Total Japanese air force, including ground and air personnel, is estimated at numbering about 600,000 persons, of which two-thirds are in the Jap army and one-third in the Jap navy air force.

Japanese pilot ability, which was of high order in 1941-42, has not kept pace with expanding responsibilities of air defense, the report said. Most of Japan's best aviators are dead.

Japan's fighting planes are improving in quality but do not yet match corresponding improvements in U. S. aircraft. Current production is estimated to be between 1,250-1,500 planes per month.

Current Japanese plane losses in the air and on the ground are estimated to exceed 1,000 a month.

U. S. Army and Navy airmen have long noted a lack of harmony between Japanese army and navy air forces, and the contemporary Japanese flyer is not in a class with his immediate post-Pearl Harbor brother.

The Japs have virtually abandoned daylight horizontal conventional bombing attacks on Allied land bases or convoy with air cover, and have adopted dawn and dusk bombing by Jap fighters, and night bombing by medium, torpedo and dive bombers.

Suicide attacks have become frequent and determined and evidence indicates that an actual suicide attack organization has been formed and that members receive special preparatory training for work of this nature.

Army Honors Heroes

Names of 24 AAF officers who have died since Pearl Harbor will be commemorated on the prows of the Army's recently announced fleet of aircraft repair ships. It is the first time that large vessels have been named for deceased AAF heroes. Six large repair ships are being named for Major Gen. Herbert A. Dargue, Major Gen. Robert Olds, Major Gen. Walter R. Weaver, Brig. Gen. Asa N. Duncan, Brig. Gen. Alfred J. Lyon, and Brig. Gen. Clinton W. Russell.

Gates Elevated

Artemus L. Gates, assistant secretary of the Navy for air since before the war, has been named undersecretary of the Navy to succeed Ralph L. Bard, resigned. John L. Sullivan, of Manchester, N. H., former assistant secretary of the Treasury, succeeds Gates in the air post.

RAF Adopts Nautical Mile

The Royal Air Force has adopted the knot and the nautical mile as the standard measurements for speed and distance,



TWA Men in NATS— Six TWA employees on military leave serving with the Pacific Wing of Naval Air Transport Service are shown under the nose of a Douglas Skymaster at Honolulu. Standing, l. to r.—Lieut. Comdr. John B. Hulburd, assistant operations officer for NATSPAC; Lieut. Comdr. F. G. Sargeant, officer in charge of pilot training, Air Transport Squadron 11; Lieut. Comdr. Jack Sandy, flight officer, Squadron 11; Lieut. Comdr. A. E. MacKille, executive officer, Squadron 12. Kneeling, l. to r.—Lieut. Comdr. O. L. Ericson, operations officer, Squadron 4, and Lieut. Comdr. Newton Lieurance, senior aerology officer, NATSPAC.

according to word from London. Bomber Command changed over recently. Now the Air Ministry has sent directions to all other commands that the changeover is to be made when convenient and practical.

P-47s Seek Record

A pair of long-range Republic P-47N Thunderbolt fighter-bombers attempted to set a non-stop transcontinental speed record June 7 but were forced down at Dayton, O., on their way from Los Angeles to Mitchell Field, Long Island. Another attempt will probably be made.

American Completes 7,000

Completion of the 7,000th crossing of the Atlantic by American Airlines, Inc., operating under contract to the Air Transport Command, was reached May 31. A total of 231 departures from La Guardia to overseas points was made in May and the airline flew over 1,717,000 miles in army service for the month.

Paris Roundtrip Record

Maj. Levi H. (Dick) Dice, of New York, a former Eastern Air Lines captain, now assigned to the 503rd Base Unit, Air Transport Command, made a fast round trip flight to Paris from Washington a few weeks ago. He left Washington at 1:25 p.m. on Wednesday, May 23, arrived in Paris at 10 a.m. Thursday, left Paris at 12:10 p.m. that day and reached Washington at 10:50 a.m. Friday, 45 hours and 25 minutes elapsed time.

Hawaii-to-Washington Record

Landing at Washington National Airport June 16 at 11:43 p.m., Maj. Gen. Curtis E. LeMay, commanding the 21st Bomber Command, stepped from a B-29 Superfortress which had just established a new Hawaii to Washington non-stop flying record—30 hours and 15 minutes for the 4,640 miles of air travel. Gen. LeMay thus beat his own record of 4,100 miles from Kharagpur, India to Guam which he flew non-stop Jan. 19.

New Navy Unit

The Navy Dept. has established a new office of research and inventions to develop weapons and battle techniques. The new office merged the Naval Research Laboratory, the special devices division of the Bureau of Aeronautics, the office of research and development, and the office of patents and inventions. It will be under direct supervision of the Secretary of the Navy. Rear Admiral Harold Bowen will head the office and Capt. Luis De Florez, USNR, Pomfret, Conn., who has been director of the special devices division and was winner of the Collier Trophy in 1944, will be assistant chief.

Helldiver Record

Not a single Curtiss SB2C Helldiver or torpedo plane of an Air Group commanded by Comdr. Daniel F. Smith, Jr., USN, of New York, was lost in 1,155 sorties, it has been announced. The Air Group took part in raids on Bonin, Palau, Formosa, Manila and other Pacific

areas and flew from an Essex-class carrier. The Helldivers probably sank and damaged 117 Jap ships totaling 554,000 tons.

WAVE Navigators

The Navy has designated 30 WAVE officers as Naval Air Navigators to perform navigational duties, the first women officers in any U. S. military organization entitled to perform duties as part of a military air crew. They will wear the regulation navigator's wings. At present they are functioning as navigational instructors but will also serve as trans-ocean navigators in those theaters where WAVES may be assigned to duty. This will include Hawaii and the Aleutians.

AAF Tactical Center

The AAF Tactical Center, Orlando, Fla., has been redesignated the AAF Center. The Eglin Field Proving Ground Command was absorbed under the command of the AAF Center. The name of the AAF School of Applied Tactics was changed to the AAF School. The AAF Board was placed under the command of the Center and its organizational designation changed from the 3rd AAF Base Unit to the 901st AAF Base Unit. The Board formerly reported direct to AAF Headquarters. Brig. Gen. Grandison Gardner, commanding general of Eglin Field, assumed command of the Center during the temporary absence of Maj. Gen. Edwin C. House.

• Brig. Gen. Lawson H. M. Sanderson, USMC, known as "the father of dive bombing", has assumed command of the 4th Marine Aircraft Wing and all shore-based aviation in Gilbert and Marshall Islands.

• Brig. Gen. Gordon P. Saville, veteran tactical air commander of Mediterranean and European operations, has assumed his duties as Deputy Commander of the AAF Air Transport Command.

• Col. Arno H. Luehman, Tampa, has been made chief of staff of the 13th Air Force.

• The Air Technical Service Command has taken over the altitude testing chamber at Willow Run for tests on navigation instruments, electrical equipment, etc.

• Col. Ray Ireland of the Air Transport Command, former general traffic manager for United Air Lines, has been awarded the Legion of Merit for extraordinary services with the ATC.



B-25 Descendant—This is the first picture to be released of the North American XB-28, an experimental medium bomber recently declassified by the Army Air Forces. While it bears an unmistakable family resemblance to North American's famous B-25 Mitchell, the single tail is more like that of the A-26 Invader and B-26 Marauder, while the extra long nacelle design with a tail pipe and an air scoop behind the cowl suggest that it was provided with jet as well as reciprocating engines.

ATSC Section Set Up To Administer Statutory Renegotiation, Price Work

The price-control sub-section of the production section of the Air Technical Service Command, Wright Field, has been set up to administer price analysis and statutory renegotiation work to augment the War Department's company pricing program, Brig. Gen. Orval Cook, chief of procurement, announces.

Lt. Col. A. P. Smith, Jr., will head the new organization which is designed to assure uniformity of policy.

"The cost of airplanes and equipment purchased by the ATSC has shown a marked reduction as manufacturers have gained experience and smoothed their production flow," Col. Smith said. "Actually these savings, not only in dollars but also in manpower, have been poured back into production, with the result that we are getting correspondingly greater quantities of planes and equipment with which to overwhelm the enemy."

Miami Focal Point

A transport plane will land at Miami Army Air Field from Europe every 45 minutes day and night as part of the Air Transport Command's program of flying 50,000 soldiers a month to the U. S. The bulk of the men will be flown to Miami, according to Lt. Col. Joseph C. Mackey, commanding officer of the base. Some 300 C-47s, C-46s and C-54s will be utilized. The operation calls for crew changes and servicing for return trip to be accomplished in less than 2 hours.

British Lincoln Bomber Underway in Manchester

The British Lincoln bomber, comparable to the U. S. B-29, is now in production at the A. V. Roe Works, Manchester, producer of the Lancaster bomber, according to London press reports. The new combat ship will be utilized against the Japanese in the Pacific.

Specifications of the bomber were not disclosed, nor was the number of such aircraft to be built. The Ministry of Aircraft Production said that "it should not be unduly difficult" to convert the combat craft to commercial transports.

New Parachute Cuts Oscillation in Descent

Existence of a new type parachute which eliminates oscillation in descent has been revealed. Called the "baseball" parachute, it was developed and perfected for the armed forces by Leonard P. Frieder, president, and Walter Funken, chief engineer, of General Textile Mills, Inc.

It is constructed as a perfect hemisphere and is made of sections of material cut in the form of figure 8s and then sewn together in the manner of a baseball cover. The resulting hemispherical form, the makers say, eliminates oscillation. Tests made by the RCAF and the U. S. Army and Navy have demonstrated that it may be launched safely from planes travelling at higher speed than is possible with the conventional parachute, it is said.



MacArthur's 'Flying Headquarters'—This is the interior of the C-54 which Douglas Aircraft Co. has fitted out for use by Gen. Douglas MacArthur and his staff. Interior modifications include provisions for desk space, meals, and sleeping accommodations.

K9-28,
Army
amous
while
ggests

at
ope
as
an-
000
The
to
eph
of
46s
The
ges
be
ara.

ester
arable
uction
hester,
r, ac-
The
gainst

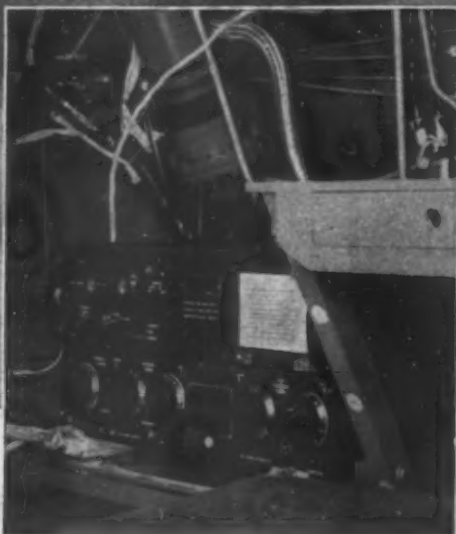
re not
such
f Air-
ld not
ombat

cent

achute
nt has
eball"
fected
rd P.
unken,
Mills,

hemi-
aterial
sewn
eball
form,
lation.
U. S.
d that
planes
ossible
it is

45



The Collins-designed transmitter as operator sees it from his station in a Superfortress. Boeing—Wichita Photo.

Superfortresses blast and roast Japs. Official photo U.S.A.A.F.

In the Boeing B-29 from the first

THE FIRST MESSAGE from the Army's first Boeing Superfortresses over Japan, on the Yawata mission of June 15, 1944, was transmitted by a Collins radio transmitter of the type shown above. From that time on, this transmitter has been standard equipment for all the Superforts, as it is also for the larger Naval aircraft.

As the Army and Navy demand increased, requirements exceeded the capacity of the extensive Collins facilities, and other manufacturers of radio equipment were drawn into the production program, aided by Collins engineers. Total deliveries have been very large.

Collins engineering and production have gained much valuable experience during the war in providing reliable radio communications under all operating conditions in practically every quarter of the globe. This experience will be available to commercial and personal users as soon as military requirements permit. Collins Radio Company, Cedar Rapids, Iowa; 11 West 42nd Street, New York 18, N. Y.



IN RADIO COMMUNICATIONS, IT'S . . .



*Buy More War Bonds
and Stamps*

Announcing



Jack & Heintz, Inc., Cleveland, Ohio, Manufacturers of Aircraft Engine Starters • Generators

Introducing the New JH-6 Starters

... LIGHTWEIGHT CHAMPIONS WITH A HEAVYWEIGHT PUNCH!

IN answer to aviation's insistent demand — MORE and MORE for LESS and LESS — Jack & Heintz now contributes a great new family of ultra-lightweight starters, the JH-6 series. In these powerful champions, Jack & Heintz engineers have solved the basic problems that have plagued aircraft engine starting for so long.

Exhaustive tests conducted by the Army Air Forces and the U. S. Navy under all conditions of temperature and service operation showed conclusively that aircraft engines could be started effectively with a small battery, using a properly matched, efficient starter. In this significant piece of research work Jack & Heintz provide a variety of starter and motor combinations from which a satisfactory selection was made. From this selection was evolved a starter; a mechanism smaller, lighter and more efficient than any heretofore produced—the JH-6.

Extreme lightness is achieved without impairing the rigidity, resistance to vibration, power and efficiency. The proper application of modern die casting technique has made it possible to combine this lightness of weight with proper distribution of mass to insure maximum operational stability.

This starter will crank an engine requiring a load of 400 ft. lbs. at a speed of 50 r.p.m. or more, when supplied from a 24-volt system. Even with a depleted battery and a voltage of only 13 or 14, it will still crank this load at better than 25 r.p.m. with an over-all efficiency of 65% or more.

A simplified, multiple disc clutch having a very large plate area gives a velvet-smooth release action and maintains the proper torque setting throughout its service life. A new base simplifies engine mounting and a new snap-on cover simplifies routine inspection. In every design detail the engineering choice has been meticulous and the working elements—the bearings, clutch, gears, jaw operating mechanism and motor—make the JH-6 a mechanism with long dependable service life and a minimum of maintenance. Today — and as long as there is a Jap fighting — JH-4s, JH-5s, and now the new JH-6 starters, will be helping our fighters get off faster for the war in the Pacific.

Complete engineering data on the JH-6 starter is available.




JACK & HEINTZ
Incorporated

*To the grown-up boy who
used to dream of owning a plane..*



This "Propeller with a Brain" brings performance beyond the prewar hopes of private flyers

That's right! Aeromatic—the one and only self-acting variable pitch propeller—will make that postwar plane of yours perform "like a dream." It will let you takeoff with one-fourth shorter run. Increase your rate of climb one-third. Give you greater cruising range and speed. And yet keep fuel consumption and engine wear down to a minimum. What's more, with Aeromatic you'll get long glides for happy landings—with an instantaneous change of pitch for a quick pickup if you overshoot the landing strip or field.

Completely self-contained and self-acting, the Aeromatic Propeller lets your plane and engine

deliver automatically, as no other propeller can, all the performance that is built into them. Without instruments or controls—with nothing extra for you to watch or do—it automatically assumes the correct pitch for peak efficiency under all flight conditions. There's nothing else like it.

If you fly, or plan to fly, you will want an Aeromatic Propeller on your plane. Write to your aircraft manufacturer about it today. And if you'd like our little get-acquainted folder, containing a diagram of the "brain" in an Aeromatic, drop a line to Aeromatic, 284 Scott St., Baltimore 3, Md. We'll be glad to hear from you.

The Propeller with a Brain for Tomorrow's Plane



Licensed under patents of EVEREL Propeller Corporation

Private Pilot Licensing May Be Accelerated

CAA Advisory Group Makes Recommendations

THE CAA Non-Scheduled Flying Advisory Committee, at its meeting in Washington June 13 and 14, recommended that commercially certificated pilots, as well as CAA inspectors, be allowed to give examinations and issue certificates for a private pilot's license. This would speed up the issuing of licenses to the large number of returned servicemen who wish to take up private flying, the Committee believes.

The Committee set up minimum qualifications for the commercial pilot, said to be "slightly liberal but safe." He should be over 21, should hold a flight instructor's rating with a minimum of 500 solo flight hours and 200 hours of flight instruction experience, and should be permitted to charge a fee.

The Committee further recommended that the CAA work with the Department of Interior to provide for airports in all national parks so that aviation tourists will have facilities comparable to those available for motor tourists.

A third recommendation stated that with the example of the successful operation of three major airports in close proximity at Washington, the CAA should not establish criteria of minimum distances permissible between airports, but should endeavor to promote procedures permitting location of airports close to cities. After a meeting with Sen. Edwin C. Johnson (D., Col.), Rear Admiral John Cassady and Capt. John W. P. Vest of the Navy, Col. F. E. Rouse of the Army Air Forces, and Assistant Secretary of Commerce Burden, the Committee urged CAA to continue its Air Education program in the secondary schools and to continue to study future Federally-effected flight training "to convert our air-mindedness to airableness. It was also urged that CAA in conjunction with the Weather Bureau resume its broadcasts from all weather stations. A committee was appointed to study Part .03 of the Civil Air Regulations consisting of Fred Weick, chairman; William A. Piper, William A. Mara and James C. Johnson. The National Aeronautics Association was praised for establishing a panel of physicians to study simplification of the medical examinations for licenses.

Parks to Sell Ercoupes At Marshall Field & Co.

Parks Sales & Service, Inc., of which Oliver L. Parks is president, has announced the signing of a contract with Marshall Field & Co. of Chicago for the sale of the Ercoupe at the widely known department store. Parks said he expected that the Ercoupe would be placed on display at Marshall Field & Co. by Oct. 1.

Under the terms of the contract, Parks' salesman will do the actual selling. When the plan is in full operation, one Ercoupe will be on display on the first floor, another on the sports goods floor of the Store for Men. Financing will be handled through the Parks organization.



Prototype version of the Skyhopper, developed by Aviation Booster's, Inc.

\$1,000 Plane Offered By Kansas City Firm

THE SKYHOPPER, a single place sport plane which will get off fields with no more than 400 feet of runway, climb at 750 ft/min, and cruise at 110 mph has been announced by Aviation Boosters, Inc., Kansas City, Mo. It will sell for approximately \$1,000, and will require little or no upkeep other than gas and oil.

Powered with a 50 hp Continental fuel injection engine, the Skyhopper has a span of 25 ft., overall length of 18 ft, and maximum height of 63 in. It has an empty weight of 612 lbs. and a design gross weight of 850 lbs. Top speed is given as 125 mph, and range at 275 miles with 10 gallons of gasoline.

The new ship has a two spar wood and plywood fabric covered wing, and the fuselage is of welded steel tube construction, faired and fabric covered. Plywood fixed tail surfaces are used with fabric covered welded steel rudder and elevator. Particular emphasis has been placed on eliminating all fittings and joints subject to shock load and reducing the number of points which require frequent inspection.

In order to ease maintenance and inspection of the engine compartment, the cowl is made in four individual removable sections, each held in place with fifteen extra large cowl fasteners to minimize the possibilities of cracks around the fasteners. The entire cowl is mounted to the basic airplane structure with the engine free to move independently of the cowl. Hinged inspection doors are provided at critical positions to further simplify visual inspection and maintenance.

The engine is shock mounted to remove all possible vibration from the forward portion of the ship. All instruments are likewise shock mounted according to Army standards to increase life and permit more accurate readings.

Movable control surfaces are statically balanced for flutter prevention and vibration free movement, and large bearing margins are provided to insure lasting safety from loose controls. The control system is of a basic push-pull type with a small amount of cable.

Hydraulic brakes along with special brake units and parking brakes developed by Scott Aviation are standard equipment. Hayes 6.00 x 6 wheels are used to give good landing and take-off characteristics from grass fields. A welded steel truss is incorporated inside the wing to carry

all landing loads, and both wing and landing gear have been made extra strong to provide an extra margin of safety in rough field operations. The main gear consists of a special designed hydraulic shock strut which is free from all rebound and absorbs all shock through a four inch strut deflection. Low pressure tires and a special internal spring which goes into action after strut shock absorption is accomplished provide improved taxi characteristics. The tail wheel is both steerable and full swiveling.

The standard model of the Skyhopper will have an open cockpit, but a deluxe model at very slight extra cost will be equipped with a free-blown plexiglas sliding bubble canopy which will both provide protection and increase speed.

A prototype version of the new plane is now undergoing exhaustive shakedown tests to determine any improvements needed from a maintenance and ruggedness standpoint. Production models will be available as soon as war conditions permit.

New Jersey Aviation Group Headed by Bowman R. Otto

Bowman R. Otto, president of Otto Aviation Corp., has been elected president of the New Jersey Aviation Trades Association, recently formed to set up standards of aviation service to increase the safety of private flying and to sponsor greater public interest in aviation activities. Vice president of the organization is O. P. "Ted" Hebert of Safair, Inc., Bendix, N. J. Walter R. Laudenslager, owner of the airport at Red Bank, N. J., is secretary and Sanford W. Blackiston of Bridgeport, N. J. is treasurer. George Lambros, Jr., operator of the seaplane base at Ridgefield Park, N. J., and Joseph Schwanda of Hackettstown, N. J., with the officers, comprise the board of trustees. State headquarters are at 258 Liberty Street, Bloomfield, N. J.

LaPorte, Ind., Deal

Central States Aviation Co., LaPorte, Ind., has purchased Goette and Hurn Flying Service, Inc., at the LaPorte airport. Rollie Humphrey, general manager of Central States, will be in charge of the newly acquired facilities, which will continue operations as before. Humphrey said that twin-engine equipment would be acquired for charter work.

\$90 Monthly Needed To Fly Own Plane

A survey of the 46 aviation operators who are members of Aeronautical Training Society reveals that the average light-plane owner can expect to spend \$90 a month for gasoline, oil, storage, maintenance and overhaul of his plane if he uses it 20 hours a month. In addition, flight training is comparatively expensive, although ATS predicts that increased flying will lower these costs. More airports and airparks, with the lower storage and maintenance costs that will come with them, will help bring increases in private flying, but ATS warns that these facilities "will not just spring up overnight."

The ATS survey indicates that retail prices of personal planes should be about \$1400 for a two-place and \$3000 for a 4-place, to have great popular appeal, but those canvassed believe actual prices will be considerably higher, at first. Attractive installment arrangements should be used as an inducement to buying lightplanes in the period before mass production permits substantial lowering of prices, ATS suggests.

Cost of land, fear of noise, misapprehension over flying safety and the common belief that an airport is apt to be unsightly were listed in the survey as reasons preventing location of small airports and airparks near downtown and residential sections. "Lassitude and a lack of understanding of aviation" on the part of city officials is another factor causing airports to be located at an unreasonable distance from the communities they serve.

In order to develop a large body of civilian flyers, ATS finds the airplane must be given greater utility by permitting it to be brought back "from the limbo of far-away airports." Local officials should be informed of the safety records achieved by the primary training schools during the war as an example of the flying of "average pilots," it is suggested. Other suggestions for improving the community attitude toward aviation include the general use of muffling devices on engines and the location of airparks on the prevailing windward side of the community.

Turner Deplores Accidents; Asks Tighter Regulations

Col. Roscoe Turner, president of the National Aviation Trades Association, has written T. P. Wright, CAA Administrator, urging a tightening on enforcement of CAA regulations which prohibits flying of passengers for hire by pilots who do not hold the proper ratings.

Col. Turner's letter was sent as a result of three fatal accidents in Texas, Florida and Indiana during the past two weeks which were attributed to insufficiently experienced pilots carrying passengers on night-time charter flights.

NATA has recommended to the Civil Aeronautics Board that in the interests of safety, charter flying of passengers shall be restricted to pilots who have a record of no less than 500 hours, at least 200 of such time logged in cross-country flying, and that night-time carrying of passengers shall be limited to pilots holding instrument ratings.

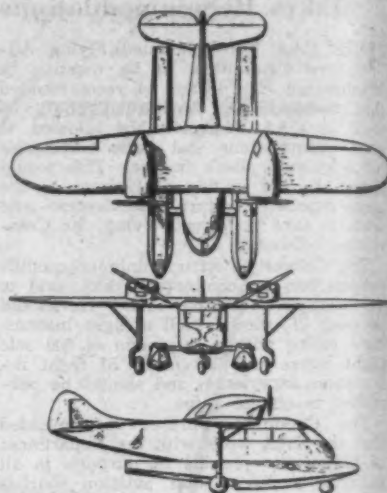
New Design Patents Issued For Helicopter, Amphibian

Two new design patents, one for a helicopter and the other for an amphibian, have just been issued to individuals, according to the Official Gazette of the United States Patent Office. The helicopter patent was granted to Edward H. Page of Baltimore for a term of 3½ years, and the amphibian patent to Theodore C. Patecell of Jackson Heights, N. Y. for a term of 7 years.

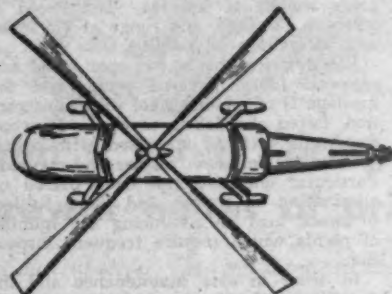
Unusual features of Page's helicopter include a conventional propeller at the tail in addition to the four-bladed main rotor, a fin and rudder combination extending above and below the fuselage at the rear, automobile type doors and a four-wheel landing gear.

Patecell's amphibian is a twin-engine design with long floats supported by members extending horizontally from the underside of the fuselage. There are no visible struts connecting these floats to the high monoplane wing. The main landing gear wheels are outboard of the floats and supported from the wing by long vertical struts with diagonal cross braces coming in at the midpoint. The nose gear extends from the forward underside of the box-like hull.

Drawings of the two planes as they appeared in the Gazette are shown in the accompanying illustrations.



Patecell Amphibian



Page Helicopter

Hawthorne Base At Albany, Ga.

Hawthorne Flying Service reports the opening of a new base of operations this week at the Albany, Ga., Airport, one of the most modern fields in Southwest Georgia. The Hawthorne hangar will include offices, lounge facilities, ready room, and a complete repair and overhaul shop. Bob Wier will serve as Hawthorne's Albany manager, and has also named airport manager by the City-County Airport Commission. The Albany airport is located on the Atlanta to Tallahassee Airway, and has three 4,000-ft. paved runways.

Simplified Pilot's Exam Completed by NAA Panel

A simplified medical examination form for the private pilot's license which was prepared by a panel of five medical specialists for the National Aeronautics Association has been presented to CAA's Non-Scheduled Flying Advisory Committee. Although the panel worked independently of either the old or new CAA medical forms, there are many points of similarity. According to advocates of a simplified examination, any real simplification must amount to asking the general practicing doctor whether in his opinion the candidate is physically qualified to fly and then taking the doctor's reply as an authoritative decision.

The NAA panel of physicians divided the examination into 11 questions designed to "focus a physician's attention" on serious disorders such as vertigo, year-round asthma and vascular diseases. Partial deafness is not considered a disqualifying characteristic. The physical examination includes investigation of lungs, stomach, thyroid gland, heart, blood pressure, urinalysis, patellar reflex, tremor, Romberg's sign and Pupillary reflex. A simple distance vision test is recommended and it is suggested that CAB prepare standardized stereoscopic cards for testing binocular depth perception.

The form concludes with the question to the physician "Do you without reservation recommend this applicant for a license to pilot a private plane?" The panel, composed of Dr. Moses L. Paulson, Dr. Jack S. Guyton, Edmund L. Keeney and Walter E. Koch of Johns Hopkins University and Herbert Schoenrich of the University of Maryland, recommended re-examination at intervals of three years.

Britain's FIDO Fog Dispersing Device Not Yet Practical for Commercial Lines

"Operation FIDO", the British announced fog dispersing device which is credited with having made possible the landing during heavy fogs of more than 2,500 Allied warplanes between November 19, 1943, and V-E day, must still undergo considerable development before it can prove practical for commercial operations, according to technical experts of the Civil Aeronautics Administration.

Their objection to "FIDO", which is short for "fog investigation and dispersal operation", is an economic one based on the quantity of gasoline required for operation of the device—according to British sources, it runs about 6,000 gallons for each plane landed, or enough gas to carry a DC-3 approximately 6,000 miles. However, there is some hope that this obstacle can be overcome by using natural gas or refinery waste products for heat generation instead of gasoline, at least in such areas as Texas, California and Pennsylvania where these products are plentiful.

Basically, "FIDO" consists of a series of oil burner-like devices which are strung along the runways like lights and literally melt the heaviest fogs away. It is so effective that a man in the control



Flames run along a pipe at the side of the runway as "FIDO" swings into action. The fuel is ignited by Dietz ignition lamps which are sunk in the ground.

tower need merely press a button, and within six minutes it is not only possible for planes to land safely, but even the stars become visible. Then, as soon as the last plane has landed, the operator merely presses the off button, and almost immediately heavy fog settles over the field once again. In addition to the burners, the "FIDO" installation includes pumping and distribution units, and fuel storage tanks. The entire installation is manned in military operations by one sergeant, three corporals and seventeen aircraftmen.

This fog lifting invention is reported to have played a vital role in making possible Allied attacks on Von Rundstedt's troops during the critical days of the Ardennes offensive. On one day alone it is credited with having made possible the landing of 91 United States aircraft at a single RAF installation.

Whiteman Airpark Opens; 1st in Los Angeles Area

Whiteman Airpark, the first of several proposed for the Los Angeles area, has been opened 6½ miles from Lockheed Air Terminal on San Fernando Road. Present facilities include 64 graded acres, a 3,200 foot main runway, temporary field office and waiting room as well as a tie-down area for 200 planes. Two \$30,000 hangars are being constructed and as soon as materials are available, club house, swimming pool and administration building will be erected with the total investment about \$200,000. The Airpark, a CAA designated field, will offer sales and servicing of private planes as well as flying instruction.

Army to Get 'Seabees'

A limited number of Republic Seabee amphibians, originally designed as a postwar personal plane, will be built at the Evansville factory of the company's Indiana Division for use by the U. S. Army in air-sea rescue work. After the war President Alfred Marchev plans to build military planes and commercial transports at the Farmingdale, L. I., plant, and personal aircraft at the Indiana Division.

Miami Air Pilots Seeking Support for Landing Areas

The Miami, Fla., Air Pilots Association is asking the support of aviation enthusiasts throughout the country in its drive to obtain adequate private airport facilities for the Greater Miami Area. The association wants landing facilities provided for the convenience of local private flyers and flying tourists, and requires them so as to plan the "All American Air Maneuvers" and the "Miami-Havana Air Cruise," which in the past were greeted with national and international enthusiasm.

NATA Backing 'Cargair' System of Warehouses

Cargair, Inc., of Los Angeles, has announced its plans for establishment of warehouses and cargo-handling services at selected airports near major shipping and distributing centers in the United States.

Nathan Newby Jr., a Cargair representative, recently explained that the plan is designed to produce charter cargo business for non-scheduled aviation operators. He stated that Cargair itself would not engage in the air transportation business but would confine its activities to establishing warehousing, ramp service, loading and unloading.

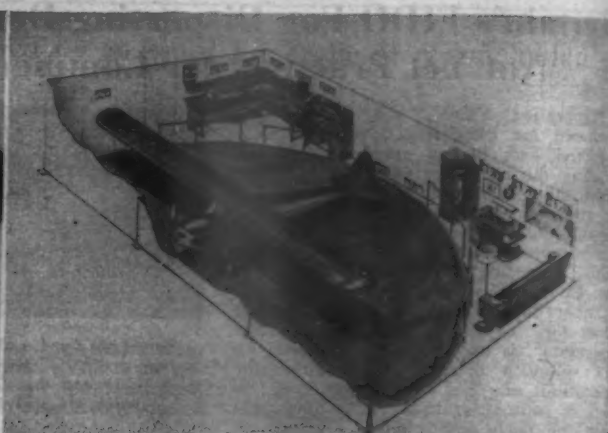
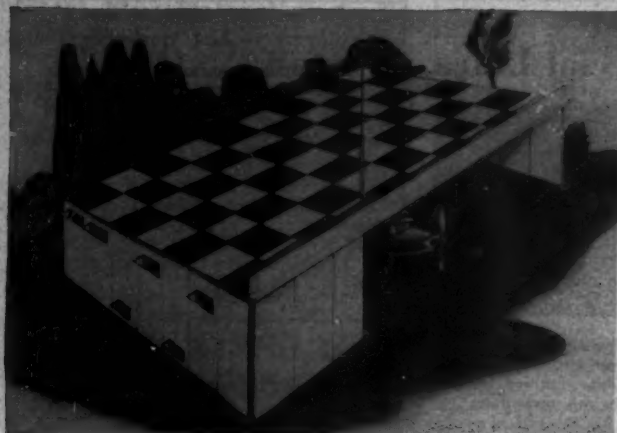
The plan has the endorsement of the National Aviation Trades Association which believes that the establishment of a national system of warehouses handling air freight will greatly increase the cargo-carrying opportunities open to non-scheduled flight operators located on the airports selected for facilities to be used in this business. N. A. T. A. has recommended that its members give support to the program when they are approached by Cargair representatives.



Fuel is supplied by these giant Sultz pumps, six of which have an output of 80,000 gallons of fuel per hour.



A Royal Air Force Lancaster, its outline blurred through the haze of the fires, takes off between the two bands of flame as fog is dispersed by "FIDO."



Exterior and Cutaway Views of Universal 'Sky Shelter', developed by Dallas firm.

ATS Broadens Program; Aims To Get Jobs for Veterans

Aeronautical Training Society has announced that it will broaden the scope of its program with emphasis on long-range national defense and promotion of projects to provide jobs for returning servicemen.

The move means that ATS is undertaking a new job, now that the remaining 64 bases will have completed training assignments for the AAF by Aug. 4. While ATS will not undertake individual job referrals, it will work closely with other aviation organizations and governmental agencies in advancing projects for practical retraining and for a high level of employment in the industry.

Although NATA has declined to consider a merger with NATA, it will work with the latter organization, along with the Feeder Line Ass'n and the Air Power League, in shaping up both the national defense and employment program. Wayne Weishaar, recently elected ATS secretary-treasurer, will supervise the new program.

3 Airports Redesignated As U. S. Ports of Entry

The following-named airports have been redesignated as airports of entry for civil aircraft and merchandise carried thereon arriving from places outside the United States, as defined in section 9 (b) of the Air Commerce Act of 1926 (49 U. S. C., sec. 179 (b)), for a period of one year from the dates shown opposite their names:

Name and location	Date of redesignation
John G. Hinde Airport, Sandusky, Ohio	June 1, 1945
Havre Municipal Airport, Havre, Montana	June 2, 1945
Watertown Municipal Airport, Watertown, N. Y.	June 2, 1945

January 1 Deadline

The CAA has set a deadline of Jan. 1, 1946 for graduates of the Civilian Pilot Training Program and War Training Service to obtain their pilot licenses without examination. All flight students who completed the primary and basic flight courses of either CPTP or WTS can obtain their private licenses by submitting proof of graduation. Flight students who completed the advanced and instructor's courses can obtain commercial licenses.

New Concept Used In Small Hangars

Universal Corp. of Dallas, Texas, has utilized an old hangar custom and designed around it an entirely new concept for individual airplane shelters.

In large hangars, when the wind had reached velocities high enough to make opening large doors a hazard it was customary to open them only as wide as the fuselage of the airplane was long—then to angle the airplane through the doors. By using this idea, Universal has brought individual hangar construction costs down 50 to 100% for all-steel all-weather hangars, with all-weather doors. This was accomplished by eliminating the 40 ft. heavy trusses necessary in the conventional "T" type hangar with the unsupported 40 ft. front. Not only did the trusses have to sustain the dead weight of the building but snow and door loads.

With this new idea, it is possible to shorten the width of the door 10 to 12 ft. and to use the column placed in the usual free span for the purpose of cantilever truss construction, which in no case requires a truss over 20 ft. in length. The unique diamond truss formation in the roof stresses the structure for both snow and wind loads at the same time lightening the steel—yet retaining a sturdy all-weather structure.

Chicago Aero Commission Approves Plans for Strip On Lakefront Near Loop

Plans for a 2,500-foot experimental landing strip for small planes on North-erly Island, on Chicago's lake front, have been approved by the Chicago Aero Commission. The plans were presented to the commission by Col. Roscoe Turner, president of the National Aviation Trades Association, which is expected to operate the temporary project.

The proposed strip already has the full approval of the Civil Aeronautics Authority, which has agreed to grant it a restricted license. It will be open only to small passenger planes, and will be placed in operation as soon as possible if the Chicago city council and park board approve the plans.

Traveling 'Air Seminars' Planned by Parks College

The "aviation seminars" for business men held at Parks Air College, East St. Louis, Ill., will be extended and traveling units established, according to Oliver L. Parks, president of the college.

A new plan has been devised for business firms in answer to requests for Seminar service in their communities. Parks intends to send a traveling Seminar unit to business firms for instruction in the overall business picture of aviation. This traveling unit would give 15 lectures and hold five round-table discussions. The material could be presented at night.

AOPA Members Expect to Pay Up to \$4,000 for Planes

A questionnaire on postwar plane preference sent out by the Aircraft Owners & Pilots Association has now been answered by 57% of the membership, according to the AOPA Pilot. Of these, 94% said they intended to purchase a plane at a price ranging between \$2,000 and \$4,000.

Ninety-four percent wanted compasses, 82% sensitive altimeters, 81% turn and bank indicators, and 63% rate of climb indicators in addition to the basic contact flight instruments as original equipment. However, only 51% wanted these advance instruments as standard equipment, with 46% desiring them as optional equipment purchased for a fixed amount financed with the plane, and 3% specifying them as separate purchases.

As a whole the AOPA pilots were critical about the failure of manufacturers to provide essential instruments in aircraft previously delivered to them, pointing out that in aircraft under the 65 hp class, only 79% had compasses, 15% sensitive altimeters, 4% rate of climb indicators and 13% turn and bank indicators.

Of the members replying, 96% had had cross country experience, and AOPA found out that almost as many lightplane owners engaged in cross country flights as owners of higher powered planes. In flying cross country, 60.35% indicated it was for business purposes only.

NEW WINGS OVER MANHATTAN

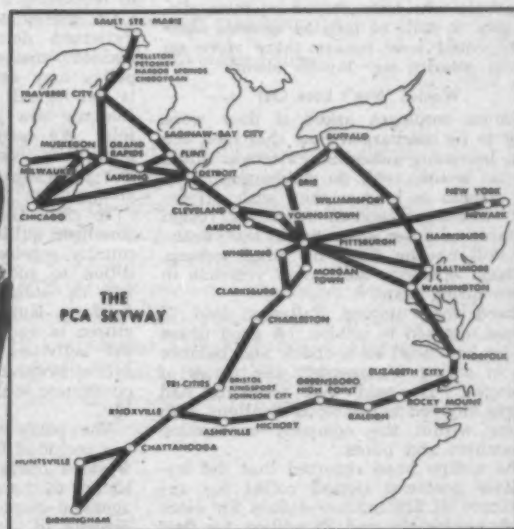


**PCA to open new route July 2
between New York, the West,
and the South**

On Monday, July 2nd, PCA—second oldest airline in this country—will become New York's newest. On that day PCA Capitaliners will start regular daily service between New York and the key cities of the west and south which comprise the PCA Skyway. Flights between Pittsburgh and New York will be non-stop.

In adding the great New York air travel market to its pattern of cities, PCA has taken an important further step in establishing a completely integrated air transport service to the industrial heart of the nation.

Two New York City ticket offices: Under the Park Avenue Arch at 42nd Street, and in the Ritz Towers Hotel, Park and 57th. Phone number is Eldorado 5-2670.



Pioneering in air travel for nearly 19 years

ege
iness
st St.
eling
er L.

busi-
semi-
Parks
unit
the
Thila
and
The
nts.

nes
pref-
rners
an-
ac-
these,
se a
2,000

asses,
and
climb
con-
quip-
these
quip-
ional
ount
peci-

were
urers
air-
point-
5 hp
sen-
dica-
tors.
had
OPA
plane
ights
In
ed it

United Air Lines Expects to Employ 18,000 by 1949

Salaries Won't Drop, Says W. A. Patterson

By PEGGY GUETTER HEREFORD

UNITED AIR LINES' over-all employment will reach 18,000 within four years, compared with the present 8000 employees and a pre-war high of 3500, W. A. Patterson, UAL president, predicted last fortnight.

His declarations were made to United employees and business leaders while on a "grass roots" tour of the company's western division. Patterson and a group of United officials covered 22 cities for the purpose of talking with local employees on company policy and postwar plans.

Patterson was on the scene to ask questions and answer questions before groups of employees ranging from two at Rick Springs, Wyoming, to well over a thousand at such centers as San Francisco and Cheyenne. In Seattle he was on his feet two and one-half hours answering questions.

Los Angeles was a typical instance. Here employees, the press and the public as represented by business and industry were given factual information. Highlights of what the employees wanted to know and the president's answers were:

What about post-war salaries? "Salaries will not go down; I am hopeful they will increase in the post-war period. I am convinced that all business and industry must work toward increased salaries after the war to promote production and purchasing power." He said that airline salaries had not sky-rocketed in face of high war industry salaries; that the people who have stayed on their airline jobs in spite of inflated salaries elsewhere could now realize there were no cuts in salaries nor layoffs ahead.

Women Won't Lose Out

Women employees asked if they were going to be discharged now that men are again becoming available, Patterson stated that no women will be discharged; they may remain as long as they wish. However, whenever women employees resign to marry or enter other work, the vacancies will not be filled by other women. All such openings will go to veterans in future hiring plans.

Asked about unions, Patterson said, "I am not opposed to unions. A good union can be beneficial as a check and balance and in giving management the views of employees. He said that company had always enjoyed harmonious relations with unions within the company—mechanics, dispatchers and pilots.

The airline head reported that the immediate post-war period called for expenditure of \$10 million dollars for electronic equipment and 25 million for fleet of 50 Douglas DC-6s. Additional money will go into new and improved twin-engine planes when such are introduced. Jet transports were some 10 years hence, in Patterson's opinion. He looks for much faster development of transport planes in five years after the war and expects depreciation of the DC-6 within five years due to obsolescence.

Patterson named the fall of 1946 as the probable start of DC-6 operations. As



New Transport Glider—California Aero Glider Co., Los Angeles, announces that it has obtained a design patent on this glider model. Specifications on the 48-passenger cargo and/or passenger glider are: Span 95 ft., length 73 ft., chords 15.75 ft. and 5.25 ft., area 1,110 sq. ft., aspect ratio 9; two speed 220 mph. Featured is a rear opening door for cargo. Total designed useful load is 10,000 lbs.

a stop-gap, he said there was talk of C-54E equipment. Expressing interest in leasing C-54E planes, the president was opposed to buying such equipment, preferring to make investment in new DC-6s.

In all new equipment, Patterson wants pressurized cabins, both in large and small transports. He added that manufacturers seem to be discounting pressurization in smaller planes.

In the post-war, Patterson said a 70 per cent load factor will be good. He hopes the present 4½ cent mile fare will be reduced to 3½ cent mile fare within five years.

Hopes for 15-cent Cargo

Cargo operations will make money and begin to attract business when the cost to the shipper is 15 cents per ton mile. When the company is prepared to enter cargo field extensively, Patterson said any spare or obsolete equipment will be put into service—that the development of a special cargo plane was not a necessity in launching a program.

On the question of chosen instrument, Patterson declared that his stand remained unchanged, and added, "The policy may never go through because it is too logical. Seriously, no one yet has told me how you can compete with cartels. We seem to overlook that we are going into international economy and not our domestic economy which thrives on competition."

To civic and business groups, the airline head outlined United's policy on community service. He declared that in addition to good air service, the company felt its obligation as an industry went further. United believes in being a good citizen in each community, taking part in the activities of the area. A localized hiring program is carried out to further coordinate with the community's economic life.

The party which accompanied Patterson included O. C. Richerson, manager of western operations; C. F. McElean, assistant to the president in charge of management-employee relations; R. F. Ahrens, director of personnel; B. B. Gregg, director of sales; D. F. Magarrell, director of passenger service; Harvey Hancock, assistant to the president; H. F. Barnes, western director of passenger service; S. N. Newman, western sales manager; J. W. Eberly, western regional personnel director; R. M. Rummel, director of publicity; Miss Jean Homolka, secretary. Robert E. Caskey, executive assistant, accompanied group during West Coast portion of the tour.

Got a Blonde Wig, Rope or Rocket Handy? If So, You Might Get On Plane

Want to get an airplane seat without priority, or even a ticket?

Western Air Lines has just released a series of four advertising mail pieces telling how to do it—but it's the hard way. This is how Western says it can be done:

First is the "stewardess disguise" method, which calls for finesse and careful timing—sometimes a blonde wig helps, depending on the gateman's whim. Secondly, there is the "interceptor" method by which the passenger simply ties a rocket to himself and overtakes the plane in mid-air. Third is the "air express" method—just wrap yourself in paper and ride in the cargo compartment, and fourth is the "lasso" method, by which you rope the plane enflight and hang on.

Much easier than any of these, Western concludes, is a telephone call to the nearest ticket office.

CAA Testing DC-4, '39,

C-46 for Civilian Use

The Civil Aeronautics Administration is starting tests on three large transport planes to release them from military to civilian use. The three planes being tested are the Douglas DC-4, Consolidated Model 39, a commercial version of the Liberator, and the Curtiss C-46 Commando. The DC-4 and C-46 were first built in accordance with CAA airworthiness requirements, but war interrupted the routine flight test before approved type certificates for civilian use could be issued.

Test pilots of the Aircraft and Components Service of the CAA Sixth Region at Santa Monica will test the Douglas and Consolidated planes, the former at Santa Monica and the latter at San Diego. Testing of the DC-4 is already in progress and work on the Model 39 is expected to start shortly. Negotiations are underway with the Army for testing the Commando, with tests scheduled to begin at either St. Louis or Buffalo as soon as a plane is available.

How a manufacturer can save money and time through the integrated Kellett plan

The Kellett Plan has enabled a number of important prime manufacturers to cut their design and production costs—to keep down their capital and overhead expense—and to improve the quality and to speed and expand the output of their own products.

The basic feature of the Kellett production

plan is that manufacturers are coming to Kellett for solutions of all technical problems, from the design of a marketable article to the quantity delivery of the finished product.

Kellett provides any or all of these specialized facilities for production, on prime or sub-contract, in any desired combination:—

- 1 Engineering Design, under a skilled staff of practical engineers.
- 2 Tool Design and Manufacture, with ample facilities available.
- 3 Photographic Reproduction for loft-template or direct manufacturing application.
- 4 Experimental Manufacture of single-item or pilot models in metal or wood.
- 5 Engineering Testing through mechanical and chemical laboratory evaluation.
- 6 Metal and Wood Manufacture, specializing in sheet metal and welded steel assemblies.

These six steps of the Kellett Plan have been developed, tested and proved in the production of more than \$30,000,000 of equipment since 1940, much of it supplied to blue-book leaders of American industry.

Proper selection of sub-contract or parts manufacturers is a means to more efficient design, tooling and production. We invite inquiries from administrative and plant executives who recognize the advantages and economies of such a method of securing the services of a highly

skilled technical and working force. Such a staff is provided at Kellett, operating under experienced supervision in plants equipped to handle complex engineering and production work in metal, wood and other materials.

In order to determine the advantages which the Kellett Plan offers you, write to Kellett Aircraft Corporation, Department SC-1, Upper Darby (Philadelphia), Pa., stating the general nature of your present or postwar design or production problems.



KELLETT

Few Airports Used by Airlines in Class 5 Or Better; Survey Lists 207 Principal Stops

DESPITE the vast amount of airfield and airport construction in the U. S. during the war, a surprisingly small number of airports used by the airlines are in Class 5 or better, a survey has revealed.

Of a total of 207 airports certificated for airline stops, 10 are in Classes 7 and 8, 20 are Class 6, and 27 are Class 5. The classifications were provided by the CAA, and the list, while not complete, is indicative of the airport situation today as it concerns airline operations.

There are five Class 8 airports now certificated for airline use, all of them developed largely as a result of military needs. These are at Lewiston, Mont.; Albuquerque, N. M.; Roswell, N. M.; Pierre, S. D.; and Watertown, S. D.

The five Class 7 airports are at Boise, Idaho; Cut Bank-Shelby, Mont.; Scottsbluff, Neb.; Hobbs, N. M., and Newark, N. J.

In general terms the CAA classifications are, as follows:

Class 1, unpaved landing strips, 1800-2700 feet; Class 2, paved runways, 2500-3500 feet; Class 3, paved runways, 3500-4500 feet; Class 4, 4500-5500 feet; Class 5, 5500 feet or better. One thousand feet is added in each category above Class 5 to make Classes 6, 7 and 8.

Thus a Class 6 airport would have paved runways of 6500 feet, Class 7, 7500 feet, and Class 8, 8500 feet. In each instance the distance given is the length of the longest runway.

A list of the 207 principal airline stops and their airport classifications, by states, follows (parenthetical figure denotes airport classification):

ALABAMA—Birmingham (5), Huntsville (3), Mobile (4), Muscle Shoals (3), Dothan (4).
ARIZONA—Phoenix (4), Tucson (4), Winslow (6).
ARKANSAS—El Dorado (1), Little Rock (4).
CALIFORNIA—Fresno (3), Bakersfield (5), Long Beach (6), Los Angeles (4), Monterey (4), Oakland (4), Palm Springs (6), Sacramento (5), San Diego (4), San Francisco (5), Santa Barbara (4).
COLORADO—Colorado Springs (6), Denver (5), Grand Junction (3), La Junta (6), Pueblo (3).
CONNECTICUT—Bridgeport (4), Hartford (4).
DISTRICT OF COLUMBIA—Washington (6).
FLORIDA—Ft. Myers (4), Key West (3), Jacksonville (6), Lakeland (3), Miami (6), Orlando (4), Pensacola (4), St. Petersburg (2), Sarasota (4), Tallahassee (4), Tampa (3), Vero Beach (6), W. Palm Beach (3).
GEORGIA—Albany (4), Augusta (4), Columbus (3), Macon (4), Savannah (4).
IDAHO—Boise (7), Idaho Falls (3), Pocatello (4).
ILLINOIS—Chicago (6), Moline (3), Peoria (3).
INDIANA—Evansville (4), Fort Wayne (3), Indianapolis (4), South Bend (4), Terre Haute (4).
IOWA—Burlington (4), Des Moines (4), Iowa City (3), Sioux City (5).
KANSAS—Dodge City (3), Garden City (3), Hutchinson (3), Salina (1), Topeka (3), Wichita (6).
KENTUCKY—Lexington (3), Louisville (3).
LOUISIANA—Alexandria (2), Baton Rouge (3), Lake Charles (4), Monroe (4), New Orleans (3), Shreveport (4).
MAINE—Augusta (3), Bangor (6), Houlton (4), Portland (3), Presque Isle (3).
MARYLAND—Baltimore (4).

MASSACHUSETTS—Boston (4), Springfield (2).
MICHIGAN—Detroit (4), Flint (4), Grand Rapids (3), Lansing (3), Muskegon (3).
MINNESOTA—Duluth (3), Rochester (3).
MISSISSIPPI—Greenwood (3), Jackson (4), Meridian (4).
MISSOURI—Joplin (3), Kansas City (4), St. Louis (5).
MONTANA—Billings (4), Butte (3), Cut Bank-Shelby (7), Great Falls (6), Helena (4), Lewistown (8), Miles City (4), Missoula (5).
NEBRASKA—Grand Island (6), Lincoln (6), North Platte (4), Omaha (4), Scottsbluff (7).
NEVADA—Elko (4), Las Vegas (5), Reno (4).
NEW HAMPSHIRE—Concord (3).
NEW JERSEY—Newark (7).
NEW MEXICO—Albuquerque (8), Carlsbad (5), Hobbs (7), Las Vegas (4), Roswell (3), Santa Fe (4).
NEW YORK—Albany (3), Buffalo (5), New York City (5), Rochester (3), Syracuse (4).
NORTH CAROLINA—Asheville (3), Charlotte (4), Elizabeth City (3), Greensboro (3), Hickory (3), Raleigh-Durham (4), Winston-Salem (5).
NORTH DAKOTA—Bismarck (4), Fargo (4), Grand Forks (4).
OHIO—Cincinnati (3), Cleveland (5), Columbus (4), Dayton (4), Toledo (3).
OKLAHOMA—Oklahoma City (4), Tulsa (4).
OREGON—Eugene (4), Medford (4), Pendleton (5), Portland (4), Salem (4).
PENNSYLVANIA—Allentown (3), Harrisburg (3), Philadelphia (4), Pittsburgh (5), Reading (4).
RHODE ISLAND—Providence (3).
SOUTH CAROLINA—Charleston (6), Columbia (3), Greenville (3), Spartanburg (3).
SOUTH DAKOTA—Huron (3), Pierre (8), Rapid City (5), Sioux Falls (4), Spearfish (4), Watertown (8).
TENNESSEE—Chattanooga (4), Knoxville (4), Nashville (5).
TEXAS—Arlene (3), Amarillo (6), Austin (4), Beaumont (4), Big Spring (5), Brownsville (5), Corpus Christi (4), Dallas (4), El Paso (3), Fort Worth (3), Houston (4), Laredo (6), Midland (5), San Angelo (5), San Antonio (5), Texarkana (2), Waco (3), Wichita Falls (6).
UTAH—Ogden (4), Salt Lake City (4).
VERMONT—Barre (3), Burlington-Montpelier (3).
VIRGINIA—Bristol (3), Norfolk (4), Richmond (4), Roanoke (3).
WEST VIRGINIA—Charleston (2), Clarksburg (2), Elkins (3), Huntington (Chesapeake & Mayes Field) (3), Morgantown (2).
WISCONSIN—Madison (5), Milwaukee (4).
WYOMING—Casper (3), Cheyenne (6), Rock Spring (4), Sheridan (3).

Detroit Plans to Ship Large Volume by Air

Allen Dean, transportation manager, Detroit Board of Commerce, told a luncheon gathering sponsored by the Aero Club of Michigan in Detroit recently that 200 Detroit manufacturers would ship over 350,000 pounds per month by air from Detroit to the San Francisco gateway if rates were approximately 10 cents per pound.

Dean said this information had been obtained through a survey and study made jointly by the Edward S. Evans Transportation Research of Washington and the Detroit Board of Trade. The study covered Detroit manufacturers and of the 436 who replied, 30% of the total number canvassed, 200 firms said they would utilize daily a daily air freight service to the west coast if a 10c per pound rate was in effect.

Panagra Starts Postwar Advertising Campaign

A "now it can be told" advertising campaign revealing wartime accomplishments and postwar plans of Pan American-Grace Airways is now being launched in six South American countries.

Emphasizing the company's slogan "The Lifeline of the Continent," the institutional campaign discloses that since 1939 annual mileage flown by Panagra increased 400%, ten times the number of passengers were carried, while cargo weights increased almost 20 times and air mail rose 600%—all in spite of wartime difficulties. Copy also points out that since Pearl Harbor Panagra has taken over much mail and cargo previously carried by ships and that in many areas Panagra planes are the only means of delivering mail.

One ad reveals Panagra's postwar plans to "shorten distances between nations and neighbors" by flying a "Great Circle" route nearly the length of the southern continent. Starting this month on a twice-a-month schedule the campaign will run in leading newspapers in Panama, Columbia, Ecuador, Peru, Chile and Bolivia.

Memberships Shifted in ATA Finance, Accounting Groups

To insure a balanced representation of the individual airlines and produce the strongest possible combinations, memberships in the various committees of the Airline Finance and Accounting Conference of the Air Transport Association of America, have been shifted.

The personnel of these committees is as follows:

Accounts and Records—L. S. Holstead (NWA) Chairman; L. E. Glasgow (AA), O. W. Crane (Branniff), M. J. Brown (C&S), H. L. Graham (CAL), T. G. Cole (Delta), R. Reikert (EAL), A. F. Graham (PCA), W. L. Walker (TWA) and L. Davis (UAL).

Army Contract—P. G. Larie (AA), H. L. Swinn (NEA), D. H. Hardesty (NWA), M. W. McQueen (TWA) and Curtis Barks (UAL).

Budget and Cost Control—F. J. Beisecker (Branniff), C. T. Chadwick (CAL), J. W. Moore (EAL), W. J. Short (PCA) and H. McGrew (TWA).

Depreciation—W. L. Walker (TWA) Chairman, J. C. Gardiner (AMEX), R. L. Barrier (Branniff), R. Reikert (EAL), J. B. Hopkins (PCA), L. Davis (UAL) and J. J. Taylor (WAL).

Finance and Earnings—E. L. Whyatt (NWA), H. K. Rullison (AA), R. H. Purcell (CAL), T. F. Armstrong (EAL), J. Collins (MCA), J. C. Brawner (NAL), R. G. Lochiel (PCA), J. B. Thurston (TWA), N. B. Hailey (UAL) and J. J. Taylor (WAL).

Insurance—Jay Jackson (Branniff) Chairman, A. A. Carlson (AA), C. R. Calhoun (C&S), H. L. Swinn (NEA), F. J. Scott (NWA), Hays Dever (PCA), C. A. Gress (TWA) and F. S. Wilson (UAL).

Organization and Procedures—J. W. Moore (EAL) Chairman, J. C. McCormick (AA), M. J. Brown (C&S), R. H. Wharton (Delta), C. R. Brandt (NWA) and R. L. Harrell (PCA).

Revenue Accounting—Geo. Fleming (UAL) Chairman, V. J. Long (AA), Lloyd Eden (Branniff), R. S. Scrivener (C&S), J. J. Medarles (Delta), F. L. Farley (EAL), J. W. Thomas (NWA), R. P. Wright (PCA), E. M. Bowers (TWA), W. R. Patterson (Canadian Pacific) and P. W. Baldwin (Trans Canada).

Taxation—C. A. Gress (TWA), T. O. English (AA), T. C. Creighton (EAL), H. L. Swinn (NEA), M. B. House (NWA) and J. B. Hopkins (PCA).

Scintilla "sparks" the finest

• FRANKLIN AIRCOOLED

• KINNER

• CONTINENTAL

• JACOBS

• LAWRENCE

• LYCOMING

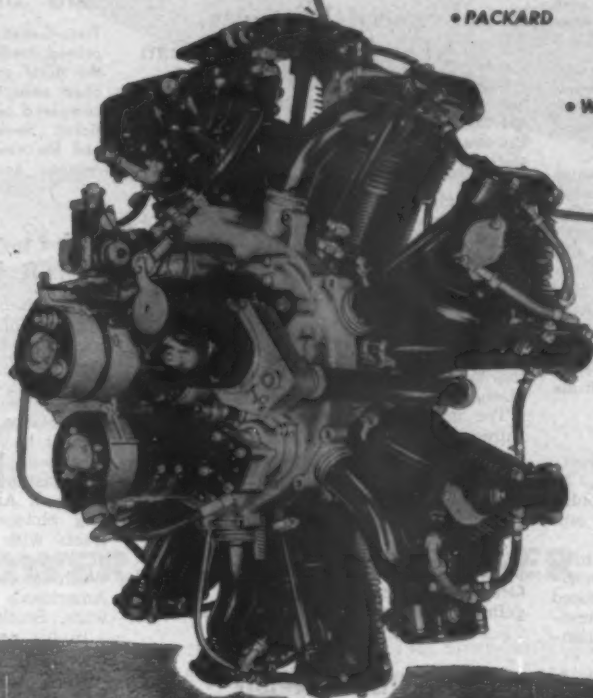
• PRATT & WHITNEY

• RANGER

• PACKARD

• WARNER

• WRIGHT



Warner Aircraft Engines . . . Chosen for one of war's tough jobs—Powering airforce trainers is no soft job. The hours are long, the pace is killing, time for overhauls is scarce, and inexperienced hands can mistreat engines.

Their fine record under these conditions is a tribute to Warner Aircraft engines, and

SCINTILLA MAGNETO

Bendix-Scintilla* Aircraft Ignition equipment.

DIVISION

PRODUCT OF

TRADE MARK

SIDNEY, N. Y.

Bendix
AVIATION CORPORATION



Complete Feeder System Planned By NAL in Southeastern States

Operation Would Be 'Relatively Costly'

NATIONAL AIRLINES announced its full intent to operate a complete feeder system in the southeastern states section in the closing days of the CAB's Southeastern States hearing in Greensboro, N. C.

J. C. Brawner, assistant to National's president, testified that feeder lines have some "future potential," but that the operation would be "relatively costly" and could be accomplished only by a presently certificated carrier.

Brawner said National would use its present Lodestar equipment for the feeder system. Trunk-line operations would be carried on with DC-4 and CW-20 equipment, he said.

In the hearing just concluded National applied for a loop route out of Jacksonville and another feeder route from Jacksonville to Mobile, via some 22 intermediate points in Florida, Georgia, and Alabama.

Southern Airways, another feeder aspirant, put Walter Schultz of Beech Aircraft Corp., on the stand earlier to testify that Beech 18-s would be available for delivery into commercial channels by Oct. 1, provided engines and other materials could be secured.

Seeks Several Routes

Southern seeks routes between Memphis-Charleston, Atlanta-Wilmington, N. C., Jackson, Miss.-Savannah, Memphis-Mobile, Atlanta-Jacksonville, Fla., and Nashville-Aniston, Ala.

Financial witnesses testified that a total of \$1,350,000 would be available to Southern with which to capitalize its proposed operations. Frank Hulse, Southern president, said the operation was set up financially on a three-year basis.

He estimated operating revenues of \$1,681,305 for the first year, against operating expenses of \$1,536,230, leaving a net profit of \$117,632. Operating revenues included \$1,287,550 in mail pay, the equivalent of 37.7c per mile. During the second year, he said, mail pay would drop to 26.6c per mile, and 16.6c per mile the third year.

C. Bedell Monro, president of Pennsylvania-Central Airlines, asserted that feeder lines have a definite place in the air transport picture, so long as they remain feeders and did not attempt to move into the trunk line field.

Monro was PCA's lone witness. He said that extensions of Route 51 into Memphis and Jacksonville would strengthen what is now a "marginal route" by providing a direct Washington-Memphis service. He estimated that the extensions would provide annual revenue of \$1,668,538, against expenses of \$1,375,951.

Earlier, the hearing listened to a clash between Delta Air Lines and Eastern Air Lines over alleged discrepancies in connections at Atlanta. Delta maintained that Eastern had refused to make connections and that as a result Delta could not get passengers into Florida from Cincinnati. This was advanced as one of the primary

reasons Delta needed to extend Route 24 into Jacksonville.

Walter Sternberg, Eastern's general traffic manager, branded Delta's statements as "malicious misstatements of fact," and raised objection to the introduction of letters through which Delta attempted to show that passengers had complained of missing connections at Atlanta. Examiner Ross Newmann allowed the letters to be admitted as evidence.

Beitel Special Examiner For Tennessee Bureau

Albert F. Beitel, former CAB examiner, has accepted an appointment to act as special examiner for the Tennessee Bureau of Aeronautics to hear four intra-state cases now pending before the bureau. Beitel, who is now in private law practice in Washington, said a pre-hearing conference would be held probably in Nashville in July.

Beitel said that the new Tennessee Bureau was empowered by the last legislature to take over jurisdiction of intra-state air transportation. The body has no authority over certificated carriers operating inter-state. The intra-state authority formerly was in the hands of the State Railroad and Utility Commission.

The act which set up the Aeronautics Bureau, provides for a public hearing on applications for air routes, but no rules of practice have been established providing for oral argument nor service of an examiner's report on the applicants. The report is filed with the Bureau.

The four applications involved in the present case are two by Southeastern Greyhound Lines, and one each by Angelina Harris and Blue Grass Airlines.

PCA, Switlik Develop New 'Chute Delivery

A new method for parachute delivery of air cargo, developed by Pennsylvania-Central Airlines and Switlik Parachute Co. was demonstrated to aviation executives and high ranking mail and air cargo officials of the United States and foreign governments at Washington National Airport last fortnight.

The sacks and parcels were dropped from a PCA Capitaliner flying over the airport at 130 mph, and landed within a short distance of each other on the grass plot beside the runway. They were ejected through a rear door by means of a conveyor developed by PCA engineers. Each chute was packed in its own canvas sack which was attached to and remained with the mail bag during the descent to the ground. The chutes were opened by a static line.

PCA officials say that parachute delivery will permit air mail and express service to any community on an airline route without any slowing down of flight operations. It can also be used to improve airmail service to United Nations soldiers at isolated Pacific outposts.



Old and New Tickets—

Trans-Canada Air Lines has adopted an improved method of ticketing. The length of the ticket covering a journey from coast-to-coast used to measure 2 feet, 7 inches, as compared with 9-3/8 inches for the new ticket. Shown holding samples of the old and the new are G. T. Featherstone (left), revenue accountant, and P. W. Baldwin, auditor.

Ray Fischer Vice President Of Air Carrier Supply Co.

Ray Fischer, veteran American Airlines employee, has assumed new duties as vice president of Air Carrier Supply Corp., a new firm formed to represent airlines on purchasing and technical information. The new company is headed by F. L. Duncan, former vice president of Colonial Airlines and for 12 years associated with American.

Prior to his resignation, Fischer served as assistant to the vice president-operations of American in Washington, handling phases of America's military contracts with the ATC and Navy Bureau of Aeronautics. He was succeeded in Washington by Carl Liedersdorf, formerly American's ATC representative at Prestwick, Scotland.

In his new position, Fischer will have charge of new business development, particularly among Mexican and South American carriers. The company was organized two months ago.

Mail Rate to Mexico Reduced

The air mail rate to Mexico from the continental United States, Alaska, Puerto Rico and the Virgin Islands was reduced to 8 cents a half ounce June 11. The former rate was 10 cents a half ounce. Postage on articles mailed in United States possessions in the Pacific, carried by trans-Pacific air service to the United States and thence by air to Mexico, is at the prescribed postage for carriage by air to continental United States plus the 8-cent a half ounce rate from the United States to Mexico. Reduced rates from the United States to the Canal Zone and Central and South American areas became effective April 1.

B-29 Modification Record by CAL

The Continental-Denver modification center set a new record for the number of B-29 Superfortresses modified during the month of May, Continental Air Lines announces. It exceeded by 8% the quota set by the Air Technical Service Command.

THE TOUCH OF TOMORROW IN THE PLANES OF TODAY



POWER FOR THE FEEDER LINES

There will come a day—soon—when the quiet inland towns, farming communities, and small cities are linked more closely to each other and to big city markets.

The lines that will draw them closer will be the airlines—the short-run lines that “feed” passengers and freight to the big mainliners on trans-country routes. Business—and competition—will grow.

Ranger Engines will take “wing-side” seats at this competitive show, offering operators of the nation’s feeder airlines, dependable, versatile, economical power!



THE RANGER TWELVE

The sleek-lined Ranger Twelve fits modern aerodynamic design. Aircooled, inverted, *inline*, it lends itself to a wide variety of installations, single or twin, pusher or tractor, open or submerged in wings or fuselage. A minimum of frontal area reduces drag.

Economy in maintenance costs looms large in profitable airline operations. Rangers are designed to meet this competitive requirement. Fairchild research and engineering aimed to give the sturdy Ranger Twelves long life between major overhauls; a low rate of gas consumption; accessibility for routine inspections and adjustments.

RANGER

AIRCRAFT ENGINES

Division of Fairchild Engine and Airplane Corporation • Farmingdale, Long Island

BUY U. S. WAR BONDS AND STAMPS

Eileen Roddick-Roberts Gets TACA Traffic Post

The new passenger traffic manager of TACA Airways Agency is Eileen Roddick-Roberts, who has been a traffic representative for TACA for the past two years.



Roddick-Roberts

Before joining TACA Miss Roddick-Roberts was staff supervisor in the traffic department of Trans-Canada Airlines in Toronto and Ottawa. She came to the United States from Wales as a young girl, and graduated from high school in Dallas, Texas, later attending Queens University in Canada.

Examiners Recommend NAL Nonstop New Orleans-Miami

CAB Examiners William F. Cusick and Richard A. Walsh have recommended in the Florida area case (Docket 480 et al) that National Airlines be certificated for a new route from New Orleans to Miami, via Tampa, with non-stop privileges between New Orleans-Miami if the traffic warrants. This would give National a direct route over the Gulf of Mexico.

The examiners' also recommended in their report that the application of Southern Airways be deferred pending a Board decision in the Southeastern States case, now in progress at Greensboro, N. C. Denial of the applications of Chicago & Southern Airlines, Eastern Air Lines and Thomas E. Gordon was recommended.

It was also recommended that National be certificated to serve Panama City, Fla., as an intermediate point on Route 39 between Tallahassee and Pensacola.

Aviation Coverage Liberalized

Liberalization of accident insurance for air travel passengers, under which the aviation coverage in its regular accident policies will include all normal passenger hazards without additional charge, is announced by Connecticut General Life Insurance Co., Hartford, Conn.

850 Hours Between Overhauls

On June 5 Chicago and Southern received approval from the Civil Aeronautics Administration to operate its Wright Cyclone engines 850 hours between overhauls. This approval covered a 50-hour extension over the 800-hour overhaul period which has been in effect for the past year. The Wright Cyclones operating on a basis of 850 hours between overhauls places C. & S. above all other airlines with the highest engine operating time, company officials said. This increase of engine operating time "is due to a perfect engine operating record for the past year and is the prime reason for the CAA granting this extension of time," the announcement said.

Miss Winters in Own Enterprise

Miss Midge Winters, formerly publicity director for Western Air Lines has opened "Publicity and Feature Writing" offices in the Roosevelt Building, 727 West Seventh St., Los Angeles, Calif.

NEW DELHI—We've now covered some 7,000 miles by air inside India and before long we'll have flown on almost every ATC route in the country . . . Here are a few impressions of what it's like to fly in India during the months of April and May . . . The pilots tell us that this is the worst time of the year—it's pre-monsoon weather and they seem to like it even less than the monsoon . . . It's the time of year when the temperature goes over 100—sometimes over 115 . . . There are violent thunderstorms and dust storms, but even when it's clear the air is rough . . . We were on a flight out of Bombay the other day, a trip of almost five hours—constant updrafts and downdrafts which kept the plane hopping around the sky . . . The crew never had a chance to relax—they were driving the plane every minute . . . As if that wasn't enough, we came in under a solid black overcast, with dust storms on the ground . . . Suddenly it felt as though the bottom had fallen out of everything . . . The plane was falling 1,500 ft. a minute, a terrific bump that collapsed all the bucket seats . . . Our musette bag was somewhere between the floor and the ceiling, where we would have been if the safety belt hadn't been fastened . . . 1st Lt. Charles George, of Seminole, Tex., and Flight Officer Sidney Fass, 1455 Sheridan Ave., Bronx, N. Y., were both on the controls of the C-47, fighting to keep right side up . . . Why the wings stayed on we'll never know, but they did, and we made a note to thank Donald Douglas for building good planes . . . During the monsoon it's solid instrument flying, but the air is smooth . . . The pilots who fly the Hump can't be given too much credit, but all too often the boys on the routes within India don't receive the publicity they deserve . . . It's tough work landing on fields with built-in crosswinds and fighting your airplane every mile of the way . . . These pilots deserve a pat on the back . . .

Speaking of the C-47, one can't help but marvel at this plane . . . Although designed many years ago, "Old Doug," as it is called, goes right on doing a job . . . It's such an accepted vehicle of transportation that the pilots never even bother to praise it any more—which is about the highest praise a plane could receive . . . And no small credit for the safety of operations over here goes to Pratt & Whitney . . . Their engines take the heat and the dust and the rain and come back for more . . . A good airplane and a good engine . . . One sometimes wonders whether there could have been a war over here without this combination . . .

V-E Day was celebrated in different ways in different parts of India . . . Because the celebrations were held on different days, we were able to see them in four cities . . . In Calcutta, things were comparatively quiet, with most people getting on with the job of beating Japan . . . Six Spitfires buzzed the business district—but good . . . A British Tommie came up to you on the street and, shaking your hand, said, "Happy victory, Yank" . . . In Bombay there was a long parade, complete with speeches . . . In New Delhi the sky was criss-crossed with innumerable searchlights, and fountains and buildings were beautifully lighted . . . In Agra, the U. S. Army turned several million candlepower on the Taj Mahal, an impressive sight . . . Most of the newspapers in these cities took a day off and didn't publish . . . But most of the military forces kept right at work . . . They were saving their celebration for V-J Day . . .

After having visited some 20 AAF, ATC and Air Service Command bases in India and Burma, one begins to form some impressions of how U. S. airmen live and the conditions they encounter . . . The climate in these countries isn't exactly ideal for fighting a war, but wherever U. S. soldiers have gone they've made the best of it . . . Tremendous progress has been made in the past two years . . . In Assam you hear stories of the old days when the monsoon descended on the unprepared Americans, turning everything into a sea of mud and making living conditions intolerable . . . Things are different now—proper drainage, better housing, improved sanitation and better food have boosted morale . . . In some rear areas to the south and west, the boys, using an Army expression, say they've never had it so good . . . And they joke about their "fur-lined foxholes" . . . But this is exception rather than the rule—in most places it's not exactly a picnic . . . No matter where you are there's the constant fight against disease—smallpox, cholera, the ever-present malaria and a variety of unknown ailments . . . Eat only in Army messes, drink only purified water's don't eat uncooked thin-skinned vegetables or fruits, take your atabrine to prevent malaria, use salt tablets—these rules are drilled into the airmen . . . In hot weather prickly heat bothers many people, and a man's efficiency often drops because it's too hot to get a good night's sleep . . . On the brighter side, food is uniformly good, there are adequate PX supplies of candy, chewing gum, cigarettes, beer, soft drinks, toilet articles, etc. . . . But nothing can compensate for the fact that the boys are away from home . . . That's the first topic of conversation—the second one being girls, and the pin-ups must average a couple of thousand per square mile . . . So, despite the fact that it isn't in the front lines, this theater has its drawbacks . . . It isn't all milk and honey . . .

ERIC BRAMLEY.

Post
er of
dick-
has
rep-
for
the
rs.
ining
Rod-
was
or in
de-
rans-
lines
and
She
the
ates
adu-
exas,
in

L
ami
and
d in
al)
for
ami,
be-
traffic
al a
in
uth-
board
case,
C.
o &
and
onal
Fla.,
be-

for
the
dent
nger
an-
In-

ived
inis-
ines
oval
800-
in
ones
reen
air-
rms.
gine
the
ex-

etty
ned
in
nth



Official U.S.A.F. Photo

Egg-laying Party - OVER TOKYO

Tumbling lazily out of yawning bomb bays, ton upon ton of explosives rain into the heart of the Japanese empire.

Unlike an earthquake, this destruction is pin-pointed where it will do the most harm. Unlike an earthquake, it keeps on day after day after day with increasing intensity.

Today, up to 500 Boeing Superforts wing over Japan at one time. Tomorrow, according to General Arnold, this number will be doubled, tripled, quadrupled. The Rising Sun will be blotted out once and for all by these deadly swarms.

We are proud that CECO carburetors have met the rigid standards of perfection required of every part in the mighty Wright engines on these B-29's. We intend to keep on building them that way — in quantity.



**CARBURETORS
FUEL PUMPS
PROTEK-PLUGS**



CHANDLER-EVANS CORPORATION SOUTH MERIDEN CONNECTICUT, U.S.A.

Public Council Recommends 11 New Routes, Added Midway Points in North Central

ELEVEN recommendations for new routes and additional intermediate points in the North Central case (Docket 415 et al) were made by Public Counsel Robert B. Hankins and Albert F. Grisard in a report released last fortnight. Bulk of the recommendations favored Mid-Continent Airlines, which would receive the following:

Temporary inclusion of Ft. Dodge, Ia., on Route 46; temporary inclusion of Mitchell, S. D., Yankton, S. D., Norfolk, Neb., and Fremont, Neb., on Route 26; temporary certification for a route from Chicago to Des Moines, via Freeport, Dubuque, Clinton, Cedar Rapids, Waterloo and Marshalltown; temporary certification for a route from Minneapolis-St. Paul to Mankato, Minn., Albert Lea, Minn., Mason City and Waterloo, Ia., and temporary certification for a local route from Chicago to Marquette, Mich., Duluth-Superior and Minneapolis-St. Paul via various intermediate points.

Other carriers recommended include Pennsylvania-Central Airlines, which would receive an extension of Route 32 from Milwaukee to Minneapolis-St. Paul, restricted so that PCA could serve the Twin Cities only on flights originating in Washington, Baltimore or Norfolk, Va.

Inland Air Lines was recommended for an extension of Route 35 from Huron, S. D., to Minneapolis-St. Paul, via Brookings, S. D., and Mankato, Minn. Alliance, Chadron, Neb., were also recommended at intermediate points on Route 35.

Bozeman, Mont., was recommended as an intermediate stop on Northwest Air Lines Route 3.

Parks Air Transport was recommended for a local route from Chicago to Minneapolis-St. Paul, via Elgin, Rockford, Beloit, Janesville, Madison, Baraboo, La Crosse, Winona, Rochester and Faribault, Minn., with the requirement that at least five intermediate stops be made on each flight. This recommendation was made on the condition that Parks be awarded other routes into Chicago in cases now pending.

United Air Lines, meantime, filed a brief attacking the application of Western Air Lines, which United held in effect amounted to three proposed transcontinental routes, including a Los Angeles-Chicago, San Francisco-Chicago and Seattle-Chicago route.

United asserted that Western "is endeavoring to maneuver the Board into a position where it will create routes which are not required by the public convenience and necessity, and which, if created, will be substantially destructive of routes and services operated by others." "Western is endeavoring to accomplish this purpose under the guise of a need for overhauling the Inland system and has emphasized the weakness of that system."

UAL Asks Reopening of Case

United Air Lines has asked the Civil Aeronautics Board to reopen the case (Docket 517) in which United in 1941, sought permission to operate daily non-stop service between Sacramento and Fresno, Calif. Non-stop service between Sacramento and Fresno would facilitate movement of wartime passengers, mail and cargo between the Pacific Northwest and Southern California due to a shortening of the route, United contends.



CAA Helicopter—For use in studying helicopter certification problems and in training CAA personnel in its operation, the Army has loaned a rotor wing craft to the CAA. Lynn Probst, chief of the Flight Instruction Unit, left, will teach four CAA men to fly it, including Paul Young, assistant chief of the General Inspection Division, right.

Non-Scheduled Airline Runs From N. Y. to Massachusetts

Trans-Marine Airlines, Inc., General Motors Bldg., New York, has inaugurated air service between La Guardia Field and Martha's Vineyard, Nantucket, and Hyannis, Mass. The company is operating on a non-scheduled basis with one Lockheed Lodestar, obtained from the Surplus Property Board in April.

The Civil Aeronautics Board is watching operations of Trans-Marine to determine whether they violate the Civil Aeronautics Act. Non-scheduled airlines have not come under CAB regulations to any considerable degree this far, although the Board is now engaged in studying all phases of such operations.

Articles of Association Of IATA Approved by CAB

The CAB has approved articles of association of the new International Air Transport Association which will permit U. S. flag carriers to become active or associate members. The articles were drawn up at the IATA's recent Havana meeting.

The Board's approval order stated, however, that the action was not to be construed as constituting "Board approval or disapproval of any subsequent contract entered into, or any specific action taken pursuant to" the articles of association.

The order also provided that "this approval shall not be effective as to any United States air carrier party thereto, and named therein, until such air carrier has accepted the articles of association" and has made proper filing with the Board as required under the Civil Aeronautics Act.

Constellations (Literal) Featured in TWA Ad

July national advertising for Transcontinental & Western Air features an unusual theme. Prepared by Arthur Kuder, Inc., of New York, for insertion in national publications during the month, the four-color ad features the principal constellations visible in the heavens at the approximate time of the ad insertions.

In the upper left-hand corner of the ad, TWA's new Lockheed Constellation which will go in service next year, is shown in flight, with the moon slightly below the port wing. The three stars of the Capricornus group appear to the left of the plane, and the Sagittarius Constellation is visible beneath the plane. Stars and moon are in positions which they assume on the night of July 24 looking toward the southwest. The ad first appears in this issue of *American Aviation* and other appearances will be made in general and business weeklies.

NAL Asks Approval Of C-A Acquisition

NATIONAL AIRLINES has applied to the CAB for approval of the acquisition of control of Caribbean-Atlantic Airlines and for approval of a letter of agreement among the two companies covering lease of aircraft and facilities and for furnishing certain services.

Under the letter of agreement, dated April 27, National has leased Caribbean-Atlantic a Lockheed Lodestar and furnished personnel for training employes and setting up operational procedures for the aircraft, which replaces a tri-motor Stinson. The agreement was directed toward the inauguration of San Juan-Ponce-Mayaguez service.

National states in its application that it will maintain the corporate entity of Caribbean-Atlantic as an operating unit over Route 59. The acquisition was approved by National's board of directors April 21 and ratified at a meeting of the stockholders May 4. National would control 80% of Caribbean-Atlantic's stock under the acquisition proposal.

Authorized capital of Caribbean-Atlantic is \$1,000,000 represented by 1,000,000 shares of common stock at a par value of \$1. A total of 41,700 shares have been issued and are outstanding.

Inter-Americas Airlines Petition Denied by CAB

The CAB has denied the petition of Inter-Americas Airlines asking that the certificate of Caribbean-Atlantic Airlines on Route 59 be revoked on the grounds that it has never given service to Mayaguez and Ponce, Puerto Rico, and had never obtained an exemption order from the Board not to render the service.

The Board held that Caribbean-Atlantic had applied for a temporary suspension order for the service Nov. 3, 1942, and had been informed by the chief of the proceedings division of the CAB that a service suspension order was unnecessary. The Board on May 14 last authorized Caribbean-Atlantic to inaugurate service to Mayaguez and Ponce, effective May 15.



(Above) A half of one of the two Beech assembly lines producing wings and nacelles for the A-26 Invader attack bomber, one of America's major weapons in the war against Japan

SHORTLY before V-E Day, the 1000th set of A-26 Invader attack bomber wings and nacelles built by Beechcraft rolled onto the loading ramp with neither pomp nor ceremony. Beechcrafters were too busy planning for the other thousands to follow to pay any attention to this milestone.

Beechcrafters know that the war is not over, until Japan has surrendered unconditionally. And Beechcrafters want to help finish the job in the shortest possible time.

They have met every assignment and every production schedule ever given to them. Even as the 1000th set of A-26 wings and nacelles came off the assembly line without causing a moment's pause in their work, so they carry on at quickened tempo until V-J Day. Beechcrafters will continue to meet all their commitments and obligations to our Armed Forces and in addition will have peacetime Beechcrafts ready for delivery at the proper time.

Beech Aircraft

CORPORATION

BEECHCRAFTS ARE DOING THEIR PART



WICHITA, KANSAS, U. S. A.

New CAA Instrument Approach Method Reduces Landing Time by 50 Percent

A NEW METHOD of instrument approach which has been developed by the Civil Aeronautics Administration, and in tests has reduced landing time by more than 50 percent, was demonstrated last fortnight to key officials of the Air Transport Association and the Air Line Pilots Association.

The demonstration, held at the Washington National Airport, and using only standard radio equipment, indicated that with VHF equipment which would provide a clear channel, landing times could be cut almost to good weather routine. A public demonstration, using VHF equipment, will be staged within the next few weeks at Indianapolis.

Five CAA transport aircraft—two DC-3's, two Lodestars and a Cessna—were used for the Washington demonstration. Zero-zero conditions were simulated by covering the windshields with green cellophane and the pilots' eyes with red goggles which permitted them to see their instruments, but blacked out outside visibility. When they got under the "ceiling", they removed the goggles for the actual landing.

Pilots Were CAA Men

The pilots chosen for the test were CAA men who held instrument ratings but were not engaged in instrument flying continually, or as much as airline pilots. Control was maintained by regular airport tower controllers.

Under the new system, arriving aircraft are "stacked up" over a fan marker which is located about ten miles from the airport rather than over the range station itself, which is usually immediately adjacent to the airport, for the holding procedure. By thus starting the descent farther out, the pilot can approach on the range leg in a straight-in approach, pass over the range station at final approach altitude, and make a normal let-down.

At Washington, the Mt. Vernon fan-marker 8.2 miles from National Airport, was used for a holding point. During the test, the ships were stacked in the usual thousand foot separation pile with the lowest at 2,000 and the high man at 6,000. Each pilot in the approach sequence was given approximately five minutes advance notice of when he should leave the fan-marker, and was allowed a plus or minus one minute error. The pilots then headed at the proper time for the range station by varying their holding paths, and without further instruction from the controller.

Immediately after the first aircraft left 2,000 ft., the second was instructed to descend from 3,000 to 2,000. Headed to the airport, each ship was stepped down as the one below left its level. During one test in which this feature was timed, the ship at 6,000 was descending 95 seconds after the one at 2,000 had passed the fan marker and started his approach. During the 95 seconds each of the aircraft in the stack had been instructed to descend and had advised the tower that it had vacated its altitude.

In normal, heavy traffic conditions, CAA officials said, Airway Traffic Control would be feeding a continuous stream into the top of the stack and passing the aircraft down past the fan marker at three to five minute intervals.

The Washington demonstration was operated "in Competition" with a normal flow of traffic conversation. CAA officials believe that even better results can be obtained in the future by allocating one VHF frequency to approach control. This would eliminate static troubles which garble conversation in bad weather, and the clear frequency would eliminate competing conversations.

A second method of approach control known as the Army-Navy system, and using localizers and homing stations, will be tested shortly at La Guardia Field in New York.

ATA Cargo Survey

The Air Express Traffic and Sales Development Committee of the ATA, comprising a joint body of airlines and Railway Express officials, has undertaken a survey of commodities that can be transported economically by air and methods of moving them. The airline members are P. E. Burbank, United; J. A. Wooten, American; H. R. Stringer, All-American; P. J. Carmichael, Continental; W. C. Burks, C. & S.; H. S. Parker, Jr., National; E. O. Ireland, TWA; Ray Grant, Western; Emory Johnson, ATA, Secretary. The Railway Express members are M. G. Lickteig, V. M. Grimalley, G. C. Lacey, R. W. Starkey, C. F. Messenkopf, C. J. Lederer, P. H. Cummings, and K. N. Merritt.

New Air Services

PCA Enters New York

Pennsylvania-Central Airlines will extend its system into New York City on July 2 with six daily non-stop flights scheduled from La Guardia Field to Pittsburgh. Three of the flights will continue west to Cleveland, Akron, Youngstown, Detroit, Milwaukee, Grand Rapids, Muskegon, Flint, Lansing and Chicago while the others will fly south through Knoxville and Chattanooga to Birmingham. Additional flights are between Norfolk, Washington, Detroit, Chicago, Milwaukee and various Michigan cities as well as between Pittsburgh and Buffalo, Baltimore, Akron, Youngstown, Harrisburg, and Erie. The new schedule calls for 35 daily departures at Pittsburgh; 34 from Detroit, 23 from Washington and 14 from Chicago.

Service Resumed to Philadelphia

American Airlines, Eastern Air Lines, TWA, and All American Aviation resumed service to Philadelphia, and National Airlines has inaugurated service to the Quaker City on its New York-Jacksonville route on the occasion of the dedication of the city's new Northeast Airport. The Philadelphia municipal airport has been closed to airlines since December, 1943, for reasons of military security.

NAL Files Schedules

National Airlines has filed schedules with the CAB calling for the following services: An additional round-trip between New Orleans and New York, via Jacksonville—a one-stop service with an estimated total flying time of 7 hours, 47 minutes; inauguration of service into Charleston, S. C.; inauguration of service to Philadelphia, flying non-stop between Jacksonville and Philadelphia.

CAB Proceedings

(A Summary of Applications Filed, Orders Issued, and Future Actions of the Civil Aeronautics Board.)

Calendar

Aug. 16—Hearing, additional Cincinnati-New York service (Docket 221 et al.).
Sept. 3—Hearing in the Great Lakes case, involving service in Michigan, Ohio, Indiana, Illinois and Wisconsin (Docket 635 et al.) (Tentative).
Oct. 1—National Airlines, et al. Mississippi Valley Case (Docket 548 et al.) (Tentative).
Dec. 3—Hearing, Mid-Continent Airlines, Inc., Kansas City-Memphis-Florida (Docket 1851 et al.) (Tentative).
Current—Hearing, Southeastern States case (Docket 501 et al.), Greensboro, N. C. (Now in progress).

Orders

3726—Pan American Airways, Inc., show cause order to fix rate over the route from Miami, Fla. to Leopoldville, Belgian Congo. (D. 1907).
3721—Serving the application of Transcontinental & Western Air, Inc. to add Bethlehem, Pa. as an intermediate point on Route 2, from Do. 1000 and assigning it to D. 1913 (Docket 221 et al.); severing the application of Braniff Airways, Inc. for service between Tulsa, Okla. and the terminal points Newark, N. J. and New York via St. Louis, Cincinnati and Columbus, and Pittsburgh and Philadelphia, from D. 1102 and assigning it to D. 1914; and consolidating the following into one proceeding for hearing: TWA (D. 221, 961, 1913), American (D. 375), Chicago & Southern (D. 581), Braniff (D. 1914), United (D. 1227) PCA (D. 1786).
3722—Denying the extension of exemption granted to Eastern Air Lines, Inc., Dec. 14, 1944, to permit the continuance of service from Evansville as an alternate intermediate point to Louisville on Route 10. (D. 1905).
3724—Permitting the City of Richmond, Va. to intervene in the Southeastern States case (D. 501 et al.).
3727—Approving an interlocking relationship between F. D. Lemmon and Railway Express Agency, Inc., and a number of other companies. (D. 1847).
3728—Relating to the Articles of Association of the International Air Transport Association (IATA) concerning A. B. Aerotransport and certain other foreign air carriers, and Aerovias Paraguaya, S. A. and certain other foreign carriers. (Agreement C.A.B. No. 389).
3729—Granting the Port of New York Authority to intervene in the Middle Atlantic Area case. (D. 674 et al.).
3730—Granting Transcontinental & Western Air, Inc. permission to serve Ft. Wayne, Ind., through use of Bear Field.
3735—Granting the City of Valdosta, Ga. permission to intervene in the Southeastern States case. (D. 501 et al.).
3736—Dismissing the application of Colonial Airlines, Inc. and John J. Carter for an interlocking relationship. (D. 1677).

Route Applications

National Airlines, Inc.—for approval of control of Caribbean Atlantic Airlines, Inc. and for approval of letter of agreement covering lease of aircraft and facilities and for furnishing certain services. (D. 1916).
Northern Cross, Inc.—for amendment of certificate so as to authorize air transportation of persons, property and mail between Nome and Kotzebue, via Deering and Candice, and between Kotzebue and Kobuk, via Noorvik, Kiama, Selawik and Shungnak. (D. 1917).
Northern Cross Incorporated—for permanent certificate to operate between Kotzebue and Point Barrow, via Noatak, Kiviliina, Point Hope, Point Lay and Wainwright. (D. 1916).
Interstate Airlines—for scheduled transportation between San Francisco, Calif. and Lake Tahoe, Calif./Nev. (D. 1919).
Pennsylvania-Central Airlines Corp.—application for a permanent and/or temporary certificate for scheduled transportation between the co-terminal points New York and Newark and the terminal point Cincinnati, via Philadelphia, Harrisburg, Pittsburgh and Columbus; and/or amendment of Route 55; and/or amendment of Route 14.
United Air Lines—for amendment of certificate for Route 11, to extend said route from San Diego, Calif. to Nogales, Ariz. and to designate Nogales as a terminal point in lieu of San Diego, with authorization to operate between these points on a permanent or temporary basis. (D. 1923).

NAVIGATIONAL, TRAFFIC CONTROL AND COMMUNICATIONS RADIO EQUIPMENT

for Military and Civilian use



Radio Receptor Co., Inc.

251 WEST 19th STREET, NEW YORK 11, N. Y.

Engineers and Manufacturers of Airway and Airport Radio Equipment

SINCE 1922 IN RADIO AND ELECTRONICS



THE ADMINISTRATION BUILDING AT JACKSONVILLE MUNICIPAL AIRPORT No. 1, SHOWING

THREE NAVY LIBERATOR PATROL-BOMBERS FLYING OVER THE TOWER IN FORMATION.

js
Orders
Civil
ew York
r, involu-
Illinois
ative),
pi Valley
nc., Kan-
el al)
[Dedus
rogram),
use order
Fla. in
ontinental
s. as an
Do. 1988
et al);
ays, loc.
terminal
via St.
(Hibourg
gning 2
ring into
221, 94,
Southern
27) PCA
granted
to per-
vansville
Louisville
to inter-
501 e
hip be-
Agenc
es. (b)
a of the
(IATA)
in other
equayes,
(Agres-
ority to
ase. (b)
Air, loc.
ugh an
permis-
as can.
el Air-
interloc-
ntrol of
for ap-
lease of
certain
artificale
person,
otzebus,
otzebus
ik and
certifi-
d Point
e, Point
on be-
Tahoe,
tion for
ate for
terminal
terminal
risburg,
nent of
4.
ate for
Diego,
Nogales
c, with
points
1923)

TRANSPORT



Place Delaney Johnson

Executive

Col. Richard E. Pfennig, on military leave as vice president-eastern operations of United Air Lines, is Deputy Assistant Chief of Staff Operations of the North African Air Transport Command Division at Casablanca.

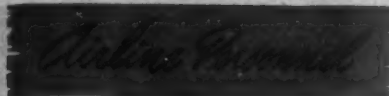
Traffic

Mabel V. Delaney has been named public information representative for American Airlines in Detroit.

Joseph T. Johnson, II, has been appointed New England DTM manager for Pennsylvania-Central Airlines and Edward W. Place has been named DTM in Cleveland.

John E. Webster has been appointed station manager for Eastern Air Lines at Memphis. Charles M. Mogri, formerly assistant chief agent at La Guardia Airport, has been put in charge of the reservations counter at the Airlines Terminal Building in New York. Gilbert L. Armstrong, former city manager for Eastern at Jacksonville, has been advanced to district manager at Atlanta. Lt. Col. George T. Cussen has returned to Eastern as assistant to the general traffic manager with headquarters in New York.

Roy Lockhart has been appointed assistant station manager at Prestwick, Scotland for Trans-Canada Air Lines. He will be succeeded in Sydney, N. S., by J. Gehlsen, as station manager. F. Majdamik, radio operator at Sydney, has been named station manager at Blissville, N. B.



Dickson Pfennig Armstrong



Warfel Bradley Cussen

E. A. "Ted" Rosser has been named director of agency sales, central region, for TWA, with headquarters in Chicago.

John F. Dickson, who has been traffic representative for PCA in Youngstown, O., has been appointed DTM in Milwaukee. Howard Kennedy has been named regional traffic manager for the



Wilson Faulkner Stevens

Washington, Baltimore and Harrisburg area. He will be succeeded as Washington district traffic manager by James E. Rehkopt.

William M. Stevens has been appointed by National Airlines as sales manager in charge of sales and promotion. He was formerly DTM in New York.

Robert G. McLain has been named manager, Air Express, Eastern Department, Railway Express Agency. He succeeds Ralph W. Starkey, who becomes director of cargo for Pennsylvania-Central Airlines.

Wesley J. Wilson has assumed the position of traffic manager of TACA Airways Agency.

Operations

Wilbur W. Bradley, formerly operations manager of Avianca, has been appointed superintendent of operations for TACT de Columbia.

Leigh R. Murphy has been named supervisor of operations in the New York district for Pennsylvania-Central Airlines. Murphy, a veteran pilot, has flown both the New York-Chicago route and the transpacific route and will go to New York to prepare for extension of PCA's system into New York on July 2.

Miscellaneous

Richard D. Warfel has been named personnel director for All American Aviation at the Wilmington offices.

Theodore W. Gibson has been appointed superintendent of maintenance for Braniff Airways. Stewart Faulkner is working on promotion and advertising for PCA in New York.

Combined CAB Table Showing Balance Sheet and Operating Data

Comparative Statement of Balance Sheet Data

Operating Revenue and Expense Statistics

As of December 31, 1944, and December 31, 1943			March, 1945 and March, 1944		February, 1945, and February, 1944		January, 1945, and January, 1944	
	Current Assets	Total Liabilities and Net Worth	Operating Revenues	Operating Expenses	Operating Revenues	Operating Expenses	Operating Revenues	Operating Expenses
All American	1944 \$241,042.49	\$1,519,866.26	1945 \$55,339	\$40,458	\$40,941	\$55,907	\$43,026	\$59,475
	1943 343,554.34	1,238,394.67	1944 44,613	41,675	38,120	41,642	40,579	44,431
American	1944 32,183,804.37	39,262,397.15	1945 3,483,439	2,911,237	2,945,929	2,585,625	3,322,201	2,745,992
	1943 27,956,092.34	33,477,875.81	1944 2,631,013	2,208,709	2,273,654	2,072,582	2,550,195	2,195,367
Braniff	1944 7,425,890.79	8,459,354.81	1945 599,684	503,992	448,989	453,757	528,391	486,968
	1943 7,174,483.98	8,848,612.11	1944 391,776	322,452	321,949	331,131	375,770	303,313
Caribbean-Atlantic	1944 45,571.10	99,949.20	1945 15,422	12,261				
	1943 58,400.21	111,586.92	1944 15,773	15,776				
Chicago & Southern	1944 1,482,012.01	2,187,615.97	1945 328,155	281,700	252,719	244,335	298,290	275,043
	1943 1,830,065.27	2,776,709.67	1944 189,303	202,571	159,567	193,074	185,819	200,125
Colonial	1944 551,282.43	904,908.00	1945 111,745	112,648	94,141	105,955	87,831	107,249
	1943 680,298.33	949,313.04	1944 64,200	74,982	62,143	77,733	70,124	72,641
Continental	1944 2,994,347.10	3,819,182.48	1945 218,590	221,894	164,745	197,138	190,013	198,409
	1943 1,867,770.23	2,448,847.54	1944 128,933	134,481	103,643	115,275	116,672	107,027
Delta	1944 2,304,742.91	3,285,424.77	1945 489,707	328,293	383,184	304,667	411,672	293,793
	1943 1,326,846.87	2,147,275.00	1944 288,446	213,025	243,442	197,347	273,421	214,033
Eastern	1944 23,045,419.15	25,507,759.64	1945 2,191,120	1,354,557	1,744,559	1,249,435	1,917,251	1,195,955
	1943 20,465,323.45	24,132,939.62	1944 1,269,024	956,942	1,158,755	918,378	1,370,028	919,569
Hawaiian	1944 767,143.73	1,098,294.21	1945 161,911	111,994	142,672	106,938	163,14	109,383
	1943 654,281.54	1,418,747.15	1944 121,516	108,948	122,097	98,228	134,370	101,571
Inland	1944 304,619.73	470,066.10	1945 147,513	132,129	117,100	105,955	116,447	98,542
	1943 233,576.94	545,008.39	1944 35,873	40,992	40,518	49,052	47,024	47,734
Mid-Continent	1944 1,531,494.05	2,275,901.79	1945 213,132	205,120	161,944	186,340		
	1943 923,633.51	1,815,108.29	1944 132,576	122,649	132,939	112,797	139,491	110,235
National	1944 2,042,933.58	2,815,577.52	1945 348,998	289,125	242,816	234,771	267,899	254,494
	1943 735,170.87	1,331,846.55	1944 144,621	197,437	147,359	150,878	143,560	138,675
Northeast	1944 1,641,520.10	2,344,130.53	1945 111,236	119,537	89,346	109,978	82,964	112,531
	1943 2,302,739.15	3,140,345.81	1944 70,371	76,159	62,490	82,313	73,679	72,715
Northwest	1944 6,425,888.24	8,538,259.28	1945 878,127	807,917	720,239	748,275	758,007	600,370
	1943 5,432,904.48	6,977,726.81	1944 448,147	475,584	444,027	447,577	492,631	523,074
Penn-Central	1944 4,313,208.55	6,240,525.46	1945 987,079	673,633	581,743	617,843	523,074	584,014
	1943 3,321,338.54	5,440,467.70	1944 338,322	333,588	284,224	338,147	321,421	337,649
TWA	1944 12,753,091.08	26,194,779.12	1945 2,807,703	2,074,970	2,119,549	1,881,279	2,214,349	1,822,035
	1943 10,075,438.32	25,505,189.72	1944 1,532,032	1,592,118	1,339,529	1,474,006	1,577,540	1,469,785
United	1944 38,101,978.27	51,154,157.97	1945 3,591,544	2,179,452	2,810,425	2,117,273	2,990,624	2,203,395
	1943 20,371,353.92	31,542,105.79	1944 2,479,019	1,882,700	2,258,476	1,627,302	2,498,546	1,768,075
Western	1944 2,363,757.05	3,847,255.97	1945 451,388	374,528	387,418	355,921	410,914	340,703
	1943 2,042,328.91	3,149,006.95	1944 213,870	216,580	198,923	201,199	197,451	212,015
TOTAL	1944 140,739,766.73	191,037,426.19	1945 17,272,032	12,781,463	13,492,583	11,883,432	14,460,544	11,838,100
	1943 108,323,603.92	157,137,126.74	1944 10,401,429	9,217,611	9,396,892	8,522,703	10,608,761	8,842,114

With Umbrella Wings

pioneer Jacob Degen sought
LIFT enough to fly

(1808 A.D.)

Pictured here is the "Flugmaschine" as exhibited by the Viennese, Jacob Degen, between 1806 and 1812. The wings (each 8½ x 22 feet) were covered with strips of taffeta attached to a central stick. This, when moved, fluttered the strips to imitate the wing feathers of a bird.



LIFT is what takes an airplane off the ground. Drag is what fights against a plane's flight. The struggle first to fly at all, now to fly ever faster and farther and higher on less and less energy, is a struggle of Lift versus Drag.

In that struggle, during the last twenty years, men of the Northrop group have written many records, achieved a notable number of "firsts."

In 1929, for example, the first of the Northrop Flying Wings successfully flew. The Flying Wing, mind you, is the first airplane in which all elements contribute to *Lift*—the first design that is free from the Drag of conventional fuselage. Later Northrop designs have eliminated the entire conventional tail as-

sembly, provided rudder action within the wing itself.

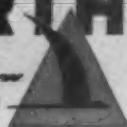
The first "over-weather laboratory," the plane which made experiments leading to today's high altitude flying, was a Northrop "Gamma" (1934). Most recently, Northrop perfected the first retractable ailerons which permit full-span wing flaps, provide a combination of tight-turning ability and slow landing speed in a large, fast airplane.

Other triumphs of Lift over Drag are ahead. Working toward them the Northrop group may be expected to design and build airplanes for tomorrow's peacetime needs. Planes that will fly further on less fuel, with more payload than the planes of today. Northrop Aircraft, Northrop Field, Hawthorne, California.



NORTHROP

Creators of the *Black Widow*
P-61 Night Fighter



and the *Flying Wing*



Full-Scale Mock-ups Employed by United in Tests

Special DC-4 and DC-6 Features Pre-Planned

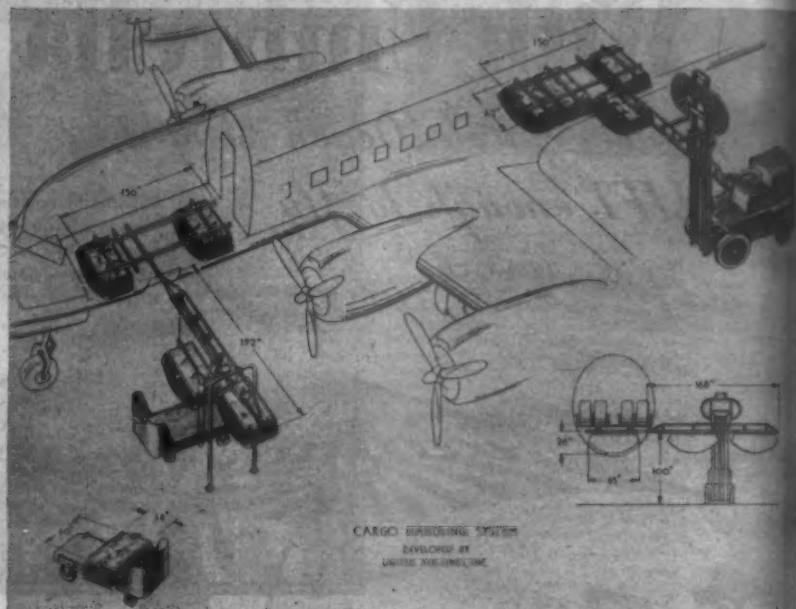
WHILE several more months may well elapse before delivery of the first of United Air Lines' fleet of DC-4 and DC-6 transports, many of the interior features of these post-war luxury liners have already been "service-tested" by United research engineers. Among the details subjected to this pre-planning are cockpit arrangements, passenger comfortization items and airborne cargo loading and handling devices.

Cornerstone of United's design research program is a group of fullscale wooden mock-ups constructed in one of its Chicago hangars. Here designers, and engineering, operating, traffic and passenger service department specialists are given an opportunity to make actual installations as they will appear in the completed aircraft, and subject them to the scrutiny and criticism of pilots, passengers and other interested parties.

Cockpits Studied Carefully

Typical of the way this program is being carried out is the study of cockpit arrangements. From studies simulating actual flight conditions, the proposed DC-6 instrument panel has been set up in the most logical order for easy pilot control. In the case of the radio compass, for example, it was first suggested that two large instruments be installed, one directly in front of the pilot, and one in front of the co-pilot. When this installation was made in the mock-up, however, it was found difficult to take readings because of lighting and other difficulties. Another arrangement was then tried, but while it proved satisfactory for approach procedures, it was not so satisfactory for navigational problems. Finally, as a result of the mock-up experimentation, it was decided to place one large radio compass in the center above the instrument panel and adjacent to the other dials necessary in the instrument landing procedure.

Similar functional studies have been conducted for every instrument necessary to the operation of the four-engined transports. But the experimentation has



Drawing of Cargo-Handling System

not stopped here. All items concerned with "living" in the flight deck—such as seating, color of trim, and other interior design features—have been considered. Even such things as whether it is easier to read instruments arranged vertically or horizontally have been carefully weighed. Lighting and its relation to eye fatigue has been a very important part of the psychological research.

Passenger accommodations for the three versions of the DC-6—chair car, combined chair and compartment car, and sleeper—have been subjected to the same careful scrutiny. United's mock-ups include cabin seating and sleeper arrangements, a suggested buffet arrangement, cloakroom facilities, and design details for the separate men's and women's lounges. As a result of the studies they have made possible many passenger service details which are now part of the routine of

ground servicing will be taken care of during flight—such items as emptying ash trays and tidying up the cabin.

Service procedures will be speeded up. The time for serving passenger meals, for example, will be reduced from two and one half minutes to a minute or a minute and a half. Two cabin attendants will be assigned, and each ship will have an ultra modern kitchen with everything within easy reach. Some of this passenger service equipment will also be used in United DC-3's. While it will mean redesigning of the buffet and other features, the studies show that it will save commissary space, reduce weight and be more economical.

One of the most interesting of United's mock-up studies has dealt with cargo handling devices. The DC-4's and DC-6's will have two main belly pits for cargo stowage. Full scale mock-ups of these pits were built at Chicago, and a monorail system developed which will make possible the loading of 4,500 lbs. of cargo in five minutes as against the 15-20 minutes now required to put 1,500 lbs. aboard a DC-3.

Interchangeable Cargo Containers

The new system utilizes interchangeable cargo containers or baskets 65 in. long and 34 in. wide, which are equipped with two small roller bearing trolleys. These baskets are pre-loaded with 500 or more pounds of mail or cargo, transported to the plane with a fork truck, and rolled onto overhead cross-rails within the plane. Longitudinal rails installed on the underside of the cabin floor beams permit sliding the baskets into the forward or aft cargo pit. Four baskets can be placed in each pit.

The baskets are constructed of aluminum alloy tubing covered with wire and weigh net 19.84 lbs. each. It has been suggested that they be equipped with a lock on the bottom so they can be opened



Interior of cockpit (left) and cabin of DC-6

He hit the Sea...

& MADE BASE!



ROTOR WOOD BLADED PROPELLERS

MINIMISE SHOCK TO
ENGINE AND AIRCRAFT
ARE EASILY REPAIRED
ENSURING A SPEEDY
RETURN TO SERVICE

ROTOR LIMITED
GLOUCESTER
ENGLAND

and the contents dropped from underneath. The entire installation totals only about 225 lbs. empty, and will accommodate 4,000-4,500 lbs. of cargo.

Alternate methods of handling the cargo outside the plane which are now undergoing mock-up research include portable monorail-equipped stands, to which the cargo would slide directly from the ship, and hand operated barrel lifts. For intermediate stations, a special boom has been devised which will lower or raise the basket, and at the same time provide space for an extra container.

In use, according to United engineers, the baskets could be preloaded and placed aboard according to destination.

Cargo Container Preliminary Weight Estimate

Container—		lbs.
Tubing—1" O.D. 22 Wall 0.229 #/ft.	4.51	
5/8" O.D. .035 Wall 0.203 #/ft.	2.19	
Angles—.032 x 1 1/4 x 74 2 each 1.306 #/	1.69	
Angles—.032 x 1 1/4 x 34 2 each 1.306 #/	0.77	
Bearings—.015 os. each 13 req.	.11	
Truck—.050 5 x 7 1/2 2.01 #/	0.53	
Floor—.020 17 ST .027 #/ (34" x 74")	4.75	
Slides—Chicken Wire 0.1875 #/	3.70	
Bolts and miscellaneous fasteners	1.50	
Guides—.109 x 1/2 x 2 1/2 2 req. (.139 #/ft.)	0.99	
Total		19.84
Horizontal Rail—		lbs.
Basket Rail—1 60 long 0.925 #/ft.	2.63	
Trucks—2 15.22 cu. in. at 0.1 #/cu. in	1.32	
Bearings 16 at 15 os. ea.	.15	
Fastenings—10-32 screws, etc.	.26	
Guides—1/2 x 1/2 x 2 1/2 4 req.	.09	
Total		4.85
Longitudinal Rails—		lbs.
Fuselage Rail—I Front Pit 6.65 x 2	13.30#	
Rear Pit	15.06#	
Total Airplane		28.36#
Total/Airplane—Based on 9 Containers—		lbs.
8 Containers—19.84 #/ea.	158.72	
8 Rails—4.85 #/ea.	37.20	
Airplane Rails	28.36	
Total Added		224.86

Rivet Bucker Patented

A rivet bucker on which a patent was recently granted to Robert J. Townsend of Donaldson, Tenn., may help speed the re-skinning as well as the original skinning of aircraft wings and metal covered control surfaces. It consists of a pair of opposed bucking bars with a spring cushioning arrangement interposed between the bars. The two bars taper to a curve at one end so as to fit the contour of the inside of a leading edge or similar assembly. The bars have recesses for receiving rivets projecting through the enveloping work.

Navigation Trainer Developed

A dead reckoning navigational trainer which will prepare 48 navigators simultaneously under all the conditions of actual flight has been developed by Bardwell & McAllister, Inc., Hollywood, for the Army Air Forces. It is now known as the G-2 trainer, and has been in use since July 11, 1944.

New Refueling Truck Holds 4,200 Gallons

A new airline refueling tank truck of 4,200 gallon capacity—more than twice that of present day equipment—has been designed by W. W. Sampselle, Southern Division manager of Progress Manufacturing Co. The new unit consists of two parts—a cab over engine tractor which houses all pumps, filters, meters, hose reels and manifold equipment, and a detachable trailer tank.

The overall length of the new unit will be approximately 33 ft., overall width about 93 ins., and overall height about 95 ins.; while present plans call for a tractor with a 148-in. wheelbase. Although no definite decision as to pumping and metering equipment has been made, Wayne vacuum sealed pumps with 110 gpm capacity, Ralph N. Brodie meters, and Warner Louis straw packed filters are being considered. A regular static wire and reel plus static wire line delivery hose will be incorporated to guard against fire.

The original plans for the Progress refueling unit call for a dual pumping installation which would permit two different grades of fuel to be delivered by the same truck. However, work is now underway on a collapsible ladder which could be raised and lowered by an hydraulic piston to facilitate reaching the wing tanks of large aircraft; and if such a ladder is incorporated in the final design, it will require the space of the second pump.

Other features to be incorporated in the Progress tanker are provisions for pumping fuel out of the airplane in order to equalize loads between the various wing tanks, and connections to permit use of the unit to pump from underground storage facilities or another tank trailer without disengaging anything but the hose



A smaller tank truck incorporating dual pumping equipment is now in use by Chicago & Southern at Jackson, Miss.

connection. Also under consideration is a "landing gear" for the trailer which would permit additional tanks to be brought in by conventional tractors, parked until needed and then exchanged for the empty trailer on the pumping tractor.

Prior to designing the proposed unit, Sampselle worked with Chicago & Southern Air Lines on a smaller unit employing dual pumping equipment. This unit is now in use by Chicago & Southern at Jackson, Miss.

New Liquid Level Indicator Accurate Within 5 Percent

A new gas gage known as a Liquid Level Indicator which is accurate within 5% under extreme conditions of temperature, altitude and plane attitude, as compared to at least a 15% error with previous fuel measurement devices, is disclosed by the Minneapolis-Honeywell Regulator Co. With no moving parts, bellows, gears, cams or levers to get out of calibration, the new device weighs slightly less than 16 lbs.

The Liquid Level Indicator now being manufactured is the second of two designs, both of which stem from a basic electronic circuit developed by Minneapolis-Honeywell for an ice indicator. Basically it consists of a long tube which is mounted within the tank, and an electronic amplifier and meter mounted in the fuselage. The tube is actually an electrical condenser with two smaller pipes inside the main pipe, and is constructed so that gasoline can flow inside it and between the two inside pipes. A minute electric current moves from one of these tubes through the gasoline to the other tube. The electrical capacitance of the gasoline, which changes with the height of the liquid within the tank unit, is measured electronically by the amplifier, and recorded on an indicating dial on the instrument panel which is calibrated to read in gallons.

Jets May Bring Economies

Jet propulsion will not only increase the speed of transport aircraft, but may also be expected to produce substantial economies in air transportation, Brig. Gen. Georges F. Doriot, director, military planning, OCMO, AEF, predicted in an address delivered for Undersecretary of War Robert P. Patterson at the Conference on Research and Regional Welfare at the University of North Carolina. He pointed out that in air travel, contrary to other forms of locomotion, it has generally turned out that increases in speed are accompanied by increases in efficiency and a lower cost per passenger mile.



Artist's conception of new type 4,200-gal. fueling unit proposed by W. W. Sampselle of Progress Manufacturing Co.

tion is
which
to be
tractors,
changed
umping

d unit,
South-
employ-
is unit
hern at

ator
rcent

Liquid
within
impera-
de, as
or with
ces, is
ney well
parts,
get out
weighs

y being
two de-
a basic
finnes-
indicator,
which
n elec-
tated in
ally an
smaller
is con-
inside
pes. A
n one
line to
acitance
with the
nk unit,
e am-
ing dial
s cali-

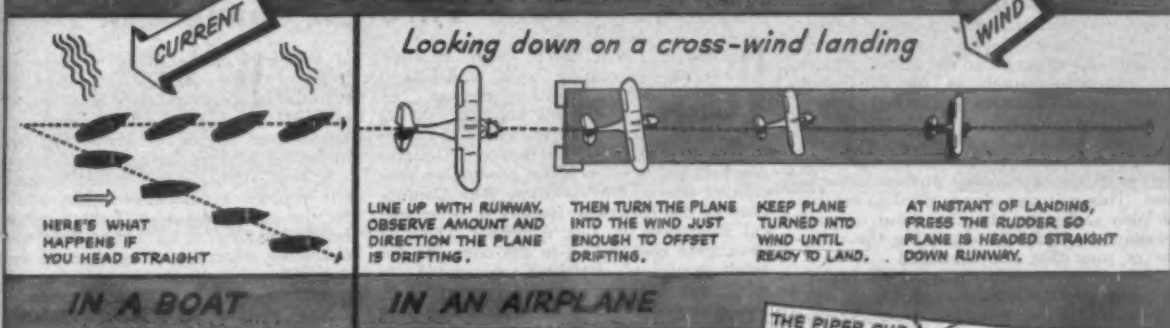
ase the
also be
onomies
arges F.
OGMO,
red for
attention
regional
carollins.
contrary
gener-
eed are
ey and

elia of

945



OFFSETTING DRIFT



Get this "How to Fly" Booklet NOW!

Describes and pictures all the basic steps in flying. Over 50 step-by-step photos. Many other facts and full-color pictures of Piper Cubs. Write Department AA75, enclosing 10c in stamps or coin for postage-handling.



IS YOUR TOWN READY TO FLY?

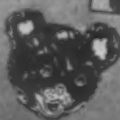
FREE Booklet, "What Your Town Needs for the Coming Air Age," illustrates and describes various types of landing facilities. It will help your community plan an inexpensive landing area now! For your copy, write Department AA75W.

MOVIE FILMS covering the fundamentals of flying and plane construction are available to you. Interesting, clear, instructive sound narration. Write us on where to obtain films on "How to Fly" and "The Construction of a Light Airplane."



PIPER CUB

Points the Way to Wings for ALL Americans



PIPER AIRCRAFT CORPORATION
LOCK HAVEN, PENNA.

In Canada:—Cub Aircraft Ltd., Hamilton

Wide Range of Devices Used By Airlines to Up Efficiency

DEVICES ranging all the way from the X-ray to a barber chair are now being used by this country's airlines to increase the efficiency of their maintenance departments and keep badly needed transports in service, according to the Air Transport Association of America.

The X-ray is being used by one airline to examine the wings of planes and locate hidden cracks in structural members, thus saving the time and cost of replacement of parts which cannot be inspected visually. The barber chair was pressed into service by another for conversion to a test stand for automatic direction finders. The resulting fixture not only cut the time formerly taken on the job, but insured a positive check as to accuracy of the direction finder.

One of the airlines has developed its own three-wheeled portable engine stand which not only cuts engine overhaul time, but increases the safety factor for mechanics on the job. It cuts about eight hours off the time formerly required to remove and install a single engine.

Engine maintenance and overhaul time on another airline has been reduced by replacing all rigid aluminum tubing with fire-resisting flexible hose that meets CAA requirements. This has resulted in the saving of as many as 35 man-hours during the overhaul of a single engine assembly.

Seed Blasting Being Used

Seed blasting is being used by many airlines to clean engine parts since it permits the blasting of the entire engine without any damage to the softer metals, and eliminates much of the handwork needed when the parts go through a tank cleaning process.

One airline uses an air cylinder to remove piston pins in one tenth the time needed by the screw type pusher formerly used. This cylinder also is used to replace the pins and saves about an hour on each overhaul in addition to cutting the number of pins that are damaged.

Little things too are playing an important part in the steadily increasing efficiency of the maintenance departments—such items as time saved in requisitioning materials from the stock room, and the use of an assembly line system with mechanics specializing in certain operations instead of performing a variety of tasks.

An airline that used to have each mechanic hand polish the parts of an engine on which he was working, for example, now uses a polishing wheel with which one man can polish all necessary parts of an engine in one and one half hours. The time saving amounts to two man hours per engine, and over the course of a year between 1,200 and 2,000 man hours are saved. In addition, a much better job is done.

To insure maximum utilization and minimum "hangar queen" hours, many airlines use group assemblies for replacement. Any one of these may be completely removed or installed in an operating condition. The groups are tested for accurate adjustment before installation so

that no further testing will be needed on the plane.

Concentrating all its major electrical and radio overhaul at one maintenance base has cut down the ground time of one airline. An assembly line system is used, and in order that operational tests may be conducted under conditions approximating as closely as possible those that take place in the plane, test stands have been developed that simulate actual flight conditions.

Maintenance, as the airlines know it, not only includes overhaul, inspection and replacement, but cleaning and servicing of planes. One airline between overhauls polishes its planes on an average of twice a month, and each time removes about 25 lbs. from the plane's weight. The vacuum cleaning of upholstery and rugs accounts for about 6 lbs., and the oil and grease removed from the plane's surface for the other 19. This job takes about 12 man hours for the interior, and another 100 to make the surface shine.

Just how big a job maintenance is shown by one airline's estimate of 9,000 man hours for a regular overhaul job, which is performed after every 8,000 hours of flight. The overhaul requires 80 men working day and night shifts for seven days.

Cost of Internal Wrenching Bolts in C-54 Reduced \$269 Through Changes in Design

DESIGN CHANGES in high strength internal wrenching bolts, undertaken during the standardization process, reduced the cost of the 217 bolts of varying diameters used in each Douglas C-54 from \$358.63 to \$88.89, B. C. Boulton, Douglas Aircraft engineer, told the production session of the recent Aviation War Conference of the American Society of Mechanical Engineers in Los Angeles. The approximate cost saving to the company for total contracts involved amounted to well over \$600,000, he said. In addition, the changes resulted in a stronger and lighter bolt with total weight savings of 8 lbs. per plane.

Boulton said that standardization is one important answer to the increasing complexity and multiplicity of today's technical developments, and that it points the way of industry to steady gains in industrial efficiency with improved products and decreased production costs. In the aircraft industry, he stated, the principles of standardization have reached far beyond hardware or simple parts into important items of equipment and airplane components formerly tailored to each plane. The benefits resulting therefrom, he added, are not intangible, but are permanent gains paying dividends month after month, and in the postwar period it will be the individual company's money on fixed price contracts which will be saved.

Other examples of the benefits of standardization in addition to the bolt cited above which were mentioned by Boulton included a change of hose clamp usage on the Skymaster and the adoption



Screwdriver Jack—This unusual tool invented by Howard Miller of Bell Aircraft Corp. is used to drive Philips-type screws in the constricted area of the carburetor air scoop. It is made of two right angle shafts brazed together to form a T with two shafts which are in line with one another and revolve in the same direction being driven by the drive shaft. One shaft is shaped to form a screwdriver bit, the other threaded to take a nut which is conical on the outer end.

of a lighter clamp for 85 percent of the total of 1,000 clamps employed, which resulted in a saving of some 50 lbs. weight and \$42 production cost on each plane, for a total saving of about \$100,000 not including savings in installation time.

Special attention was called to the present project at Lockheed Aircraft Corp. for the standardization of the aircraft ball bearing pulley as an example of the co-operative effort of many men of varying experiences, and the importance of this combined effort in standardization.

The project was initiated by R. R. Richolt, Lockheed hydraulic and mechanical staff engineer. A ball bearing manufacturer was called in. Their initial proposal went to the controls sub-committee of the National Aircraft Standards Committee. Then a design questionnaire was sent to all aircraft companies for comment. This was followed by a conference of twelve leading pulley and bearing manufacturers. Their representatives worked with two aircraft engineers. Finally a special panel from the three groups drafted the final design envelope and performance requirements and these have now been submitted to all aircraft companies for final comment and approval. More than 300 special pulleys are in current use, but under the proposal 20 pulleys will cover all requirements.

In this particular case, Boulton pointed out, improved functional quality was the objective, although cost reduction will prove an important by-product.

On the other hand, economy was the dominant factor in standardization of the AC811 series of hydraulic fittings, which

HEADLINES and HEADLINERS

* Air Travel Trend Trips Twice as Speedy For a Third Less Fare A Possibility by 1947

Boeing Stratocruiser (350-Miles-an-Hour, 120 Passengers) Spurs Others' Plans
A 3½-Cent-a-Mile Rate Seen



C. BEDELL MONRO, President, Pennsylvania Central Airlines

"COMMERCIAL airline executives have plans for providing this nation with the finest air transportation in the world. In charting our particular course, my associates and I have found it most essential to take a daily bearing from the pages of The Wall Street Journal. This publication, which gives us each

day a resume of all the business and industrial developments of the world that have an effect on our future, is 'must' reading in our offices."

C. Bedell Monroe

THE WALL STREET JOURNAL

NEW YORK, THURSDAY, MARCH 6, 1947

1 CENT

What's New

- Industrial Chemicals
- Commodity Letter
- Freight Rates
- New Laborers to Help
- Transportation's Outlook

The ONLY National Business Daily
Published simultaneously on both coasts

"Like most important business news, this story appeared first in The Wall Street Journal. That's why this national daily is 'must' reading for business men who need to be fully, accurately and quickly informed. And that's what provides such an unusually responsive audience for advertisers

usual tool
ed by
Corp. is
in the
ator air
t angles
with two
another
n being
shaft is
the other
conical

4
esign

at of the
l, which
s. weight
h plane,
0,000 not
time.
he pres-
ft Corp.
raft ball
the co-
varying
of this
n.

R. R.
mechani-
g man-
tial pro-
mitttee
s Com-
aire was
or com-
ference
ng man-
worked
inally a
s drafted
ormance
w been
nies for
ore than
ent use.
eys will

pointed
was the
on will
was the
n of the
h, which

1945

was originally proprietary and made by one manufacturer. As demand increased, other sources were needed. However, the available drawings, as released by the Army, were not completely dimensioned, and much confusion arose in interpreting these drawings. Supposedly identical parts produced by different vendors differed.

Finally Lockheed sponsored an NASC project for the preparation of a set of standard drawings. Slight changes in design and in tolerances made it possible to machine the fittings with standard tools on automatic equipment, saving tooling and manufacturing time. The NASC proposal was presented to the services and resulted in issuance of WPD Directive 6-W-2. Large cost reductions resulted—in fact, in 1944 Lockheed saved \$406,000 over previous prices due to cost reductions in straight connector fittings of this series, and greatly facilitated procurement.

The fields for the application of the standardizing principle are rapidly broadening—not narrowing, Boulton said. The highly trained design engineer is entering the picture to an increasing extent. While the need will remain for a specialized standards group in each company, there must be recognition for some decentralizing of the standards function in engineering, for some participation by high type design personnel. The benefits from a standard are more than proportional to the quality and soundness of that standard. These in turn depend directly on the ability and experience of the men responsible for its formulation.



**Manufacturers of
Sheet Metal and
Tubular Accessories
for Leading Engine
and Propeller
Manufacturers**

B-N AIRCRAFT CO., Inc.
37-31 Ridge Plaza, N. Long Island City, N. Y.

Engineering Preview

WHILE MOST MANUFACTURERS are making every effort to put their postwar transports on a production basis in order to keep the initial price down, the point is now being raised by weight engineers that this is another case of robbing Peter to pay Paul, and that the airlines will come out the loser in the end. The claim of the weight engineers is that production line ships are heavier than the custom built jobs. For example, they say that the C-47 can only be licensed at 1,100 lbs. less payload than the old commercial DC-3, and that all the added weight can't be blamed on the beefed up structure for cargo operation.

Don't overlook beryllium as a potential competitor to aluminum in the light metal field. At present magnesium is the number two light metal, but it leaves a lot to be desired in corrosion and fatigue resistance. The principal reason why beryllium has played a minor role to date is the difficulty and expense involved in its extraction. However, these same arguments were once advanced as reasons why aluminum would never see wide usage.

The prospect of jet propelled and turbine driven transports is really posing a problem for the landing gear designers, since the thin wings and small nacelles of these airliners of the future provide no space into which the main wheels can be retracted. As a result some companies are now experimenting with unconventional types of gear, and one company has come up with a solution which is reported not only to meet the retraction problem, but also to effect considerable weight saving and to open up new possibilities for the use of multiple wheels.

While General Motors' experimental two-cycle engine is generally listed as having four cylinders, it actually has eight. Each of the four blocks which form the X has two bores and two pistons. Further, a Detroit executive who has been following the development claims to have ridden in a car powered by this engine despite denials that it is intended for automotive as well as aviation use.

Don't be surprised if the Lockheed Little Dipper ends up as a two-control aircraft. At least, that's the opinion of one man who has been fairly close to the project.

The low cost fuel argument for diesel engines and gas turbines is causing some concern among petroleum companies. As one executive explains it, the refinery has to get so many dollars out of a barrel of crude, and it is this rather than the cost of refining that dictates the price of gasoline. If kerosene and diesel oil become the major products and gasoline the by-product, then their prices will have to be raised, while that of gasoline will probably go down.

Also on the fuel front, the designation of kerosene and similar products as safety fuels is being branded as another popular fallacy. Engineers point out that many of these products burn with a hotter flame and are harder to extinguish than gasoline.

The use of methyl bromide in aircraft engine fire extinguishing systems will probably be limited to multi-engine planes—possibly by statute. The reason is that methyl bromide is toxic. Out on the wings there is little if any danger of its affecting the pilot or passengers, but in single engine types it might seep back into the cockpit. The latter will continue to use non-toxic carbon dioxide.

The butterfly tail, recently introduced by Beech Aircraft Corp. on an experimental trainer, is now reported under test on an experimental version of a well known fighter—its first actual use on a single-engine plane.

When jet-propelled transports appear, some changes will probably have to be made in the Civil Air Regulations, particularly as they apply to fuel reserve. With a 400 mph plane operating over a 200 mile range, the present requirement of sufficient reserve for three quarters of an hour plus an alternate airport would mean a reserve in terms of distance half again as great as the actual fuel required for the flight. Since these regulations are intended primarily to provide for changes in weather, they would hardly seem necessary when one stops to consider that the jet would cover the distance between airports in about 30 minutes.

The world's largest bell jar is being used by Wright Aeronautical Corp. to test aircraft engine ignition systems under simulated high altitude conditions of temperature and pressure. Adaptation of the bell jar for this work is expected to speed research in these fields, since it eliminates the need for tying up larger test chambers now urgently required for other work.

Special "ditching ribs" made of wood are being installed in Liberators destined for overwater service. They are designed to protect the aircraft from damage and give the crew time to take to the rubber rafts in the event of a forced landing at sea.

All is not complete agreement among the jet engine and gas turbine manufacturers. In a recent technical paper two General Electric engineers stated that for operations at extreme ranges, the internal combustion engine compounded with an exhaust gas turbine gives by far the best performance. Others have been claiming that the straight gas turbine will prove the most economical over all ranges. . . . As for high altitude performance, the G-E specialists say the decrease in efficiency won't be as great as most people think. The reason is that the effect of lower air density will be largely overcome by the lower temperature prevalent in the sub-stratosphere.

SYDNEY CARTER

1 $\frac{3}{4}$ Million Miles in 3 Years! *Equivalent to*

640 flights New York to Los Angeles
logged by a Solar Manifold on
American Airlines Flagships



Over every battlefield as well as on the world's major airlines, Solar Exhaust Systems are recognized for their excellence in engineering design and for their precision of manufacture as shown in their remarkable service records.

Typical is the Solar exhaust manifold which American Airlines has had in service for over three years on one of their Wright G-102 engines in their Douglas (DC-3) Flagships. Through all weather conditions, this Solar manifold, in the hands of American's expert maintenance crew, has given more than 10,000 hours of notable service.

Solar skills will continue to solve problems in the elimination of hot gases, together with the utilization of waste heat energy, the control and transfer of heat and the production of products of high corrosion resistance.



SOLAR
STAINLESS STEEL PRODUCTS

SOLAR AIRCRAFT COMPANY SAN DIEGO 12, CALIF. DES MOINES 5, IA

postwar
the point
Peter to
n of the
uilt jobs.
and than
e beefed

light
caves
ason
ense
need

posing a
elles of
can be
entional
not only
and to

d as
form
been
this
use,
aircraft
ect.
using
the
ther
and
their

safety
many of
asoline
will
n is
nger
scopy
tide.
imental
ghten-

to be
erve.
ment
ould
fuel
pro-
tops
out

to test
tempera-
research
rs now

med
age
ood

atures.
rations
ist gas
at the
As for
won't
density
sphere.
FR



**OVER 50 MAJOR AIRCRAFT COMPANIES
ARE SERVED BY OUR PLANT....
Situated in the Famous PIKES PEAK Region!**

Precision manufactured structural assemblies and steel forgings for aircraft are being produced in the heart of one of the world's most famous summer playground areas—the Pikes Peak region of Colorado.

Development here of an enterprise which is producing for Uncle Sam's Army and Navy air arms did not just happen! Our planning purposefully included the selection of Colorado Springs because of its ideal year-around climate and working conditions... because of the wealth of manpower available... because of excellent transportation facilities for supplies and finished products... and—because, personally, all of us long ago were convinced that the area offered many plus-opportunities for an engineering and manufacturing enterprise.

Today, our efforts are devoted to the production of war goods. Tomorrow, our ability, experience and ingenuity will be devoted to civilian production.

Meanwhile, if it is your plan to visit the cool and delightful Pikes Peak region this summer, let us invite you also to visit our plant, and inspect for yourself the engineering and manufacturing facilities we offer.

BUY UNITED STATES WAR BONDS AND STAMPS



*** AIRCRAFT MECHANICS INC.**

COLORADO SPRINGS, COLORADO



DESIGNERS... ENGINEERS... MANUFACTURERS



Prop Balancer—Roller arbors such as this are now being used instead of knife-edge fixtures for balancing propellers at the Hamilton Standard Propellers Division of United Aircraft Corp. The roller surface eliminates the danger of nicks that was present under the old method, and also does away with the need of checking the fixture at every change of shift.

**ACCA Plans 'Scientific
Crashes', Other Tests
With Surplus Planes**

A project for utilizing surplus military aircraft in aviation research is being developed by the Airplane Technical Committee of the Aeronautical Chamber of Commerce. Tentative plans call for scientifically controlled "crash" testing of as many as 10,000 fighters, bombers and transports as a means to uncover new secrets in design and performance and accelerated developments in safety and efficiency.

ACCA recommends that the program be handled by a "government-sponsored coordinating board" with representation from the Army, Navy, CAA, National Advisory Committee for Aeronautics, aircraft manufacturers and airline operators. An informal poll of these agencies reveals that more than 50 structural and performance tests can be made, many of which would be impossible without a quantity of cheap and flyable planes.

PBM in Air 28 Hours

A new type PBM recently completed a non-stop endurance flight of 28 hours and 6 months, breaking all previous Mariner search and test flight marks by almost 10 hours. It was only 4 hours and 11 minutes less than the record endurance flight of the Mars, made in October, 1943. The PBM flight was from Patuxent, Md., to Miami, to Charleston, back to Miami and thence to Patuxent.

New Fuel Recovery Device

Heavy losses of fuel due to vaporization encountered in aircraft operating at high altitudes have been reduced by a fuel vapor recovery system perfected by Arthur J. Savard, an engineer with Consolidated Vultee Aircraft Corp., according to the Consolidated News. The unit consists of a heat exchanger similar to oil cooling radiators through which the gasoline vapor is passed. The vapor is cooled by means of airflow and the condensate collected in a tank from which it is returned to the main body of fuel by the booster pump.

Beech and Cessna Agree on Consolidation Terms

Founders of Two Firms Were Associated in Past

DIRECTORS of Beech Aircraft Corp. and Cessna Aircraft Co., both of Wichita, Kans., announce jointly that they have agreed on terms of a merger and consolidation of the two companies through the issuance of one new Beech share for each three outstanding Cessna shares.

The proposed merger was subject to approval by appropriate government agencies, and will be submitted to the stockholders of both companies once such approval is granted. No changes in management or personnel were contemplated.

If the proposal is carried out, the new company will have a line of private and commercial aircraft ranging in size from two to 15 passengers under a single distributor's contract. In addition to this sales advantage, a consolidation of the facilities of the two companies should result in substantial manufacturing and operating economies, according to the announcement, which stressed that post-war designs of the two concerns are complementary rather than competitive, and that the new company would have increased working capital.

Beech, Cessna Were With Travel-Air

Walter H. Beech, president of Beech, and Clyde Cessna, founder of Cessna, were associated in the old Travel-Air Co. Duane Wallace, president of Cessna, and Dwight Wallace, executive vice president and treasurer, are nephews of Cessna's who purchased control of the company in 1934. Duane Cessna was associated with Beech in 1933-34 as a design engineer.

Beech now has 400,000 shares of \$1 par common stock outstanding of an authorized issue of 1½ million shares. Cessna has outstanding 700,000 shares of \$1 par common of an authorized issue of 1½ million.

Beech for the fiscal year ended September 30, 1944, reported sales of \$90,468,577, after provision for renegotiation refund amounting to \$16,879,381. Net income was \$2,705,481, or \$6.76 a share, on 400,000 shares of capital stock.

Cessna reported sales for the fiscal year ended September 30, 1944, of \$40,385,571 after price adjustments. Net income was \$1,102,039 or \$1.57 a share on 700,000 shares of capital stock.



First Off the Line—This Packet was the first off the production line at Fairchild Aircraft, Hagerstown, Md. It has been flight-tested and delivered to the Army.

Reconversion Chairmen Appointed by WPB

Reconversion chairmen for about 400 industries have been appointed by John D. Small, chairman of the War Production Board's Committee on Period One. The chairmen, all officials of WPB, will advise and consult with their various industries on problems affecting machine tools, equipment, construction, and materials for reconversion, and should be consulted on all reconversion problems, WPB states.

The following industries and chairmen in the aviation field were named by Small:

Automotive maintenance type aircraft ground servicing equipment—R. H. Fussell; Lighting equipment and accessories: aircraft, airport airway—A. A. Fox; Maintenance, repair and operating supplies—S. H. Burgess; Transportation equipment hardware—J. J. McDonald; Paint and varnish making machinery—James Lawson; Plastic moulding machinery—James Lawson; Plastics: moulded and laminated—Nils Anderson; Head sets: radio—Maynard A. Cook; Electric aircraft motors—R. C. Hanna; Electric aircraft switches and circuit breakers—R. C. Hanna; Radio and radar switches—M. E. Karns; Radio and radar repair parts—M. E. Karns.

Schweizer Gets \$212,000 Loan

Schweizer Aircraft Corp., Big Flats, N. Y., has arranged a \$212,000 commitment with Smaller War Plants Corp. to finance a large sub-contract which the company has received.

Additional Lockheed Plants Due to Close

Two additional Lockheed Aircraft Corp. branch plants located in the San Joaquin Valley were to close about July 1 because of the drastic cutback in B-17 bomber production announced May 25 by the Army. L. M. Bach, vice president in charge of manufacturing, revealed. Two plants, one in Fresno and the other in Bakersfield, will remain in operation with reduced personnel.

Because both Fresno and Bakersfield no longer are classified as critical labor shortage areas, Bach said, the U. S. War Manpower Commission has given Lockheed permission to operate both remaining plants on a 40-hour week basis instead of the 48-hour week that has been in force. The new schedule of work hours, affecting only the two San Joaquin Valley plants, will go into effect about July 1.

Plant 56 in Fresno will close entirely. Plant 57, a former ice rink, will continue to operate with a force of 250. The two Fresno factories, which have produced more than 50,000 parts for the B-17 bomber and the P-38 Lightning fighter since they were opened early in 1943, employed 1600 persons at the peak of their operations and at present have about 400.

Plant 54 in Bakersfield, another former ice rink, will close, and operations will be transferred on a reduced basis to Plant 55 on North Chester Avenue. Both plants have been producing parts for the B-17, and at their peak employed about 1600 persons.

The present work force of 225 persons at Bakersfield will be cut to 60 by the end of this month. The Lockheed sub-assembly plant at Taft closed three weeks ago. Both the Fresno and Bakersfield plants remaining in operation will produce parts for a new Lockheed Navy medium bomber.

Conolite Now 'Conolon'

The name of the new plastic laminate developed recently by research engineers of Consolidated Vultee Aircraft Corp. has been changed from Conolite to Conolon.



End of the Line—Scores of workers at the San Diego plant of Consolidated Vultee Aircraft Corp. gathered at the end of the Liberator assembly line on May 31 to see the last of the four-engine Liberator B-24 bombers leave the line. This B-24M was the 6,725th Liberator built in San Diego.

British Seeking Export Outlets In Effort to Regain Leadership

Manufacturers Opening Offices in Every Land

B RITISH aircraft manufacturers have launched an all-out campaign "to regain their place as the world's leading exporters of aircraft, aircraft accessories and aircraft materials," the Society of British Aircraft Constructors has announced.

A world-wide network of branch offices is being established to further the sale of British products. Since the British Isles have never offered a major commercial outlet for British aircraft designers, it appears obvious that the British are determined to keep its industry alive through the world market.

It is also obvious that the British are far ahead of the U. S. in its effort to seek commercial outlets and is already spending sizeable sums to further this aim.

Major R. H. Kliner, president of the Society (which is financed by the industry), said that the idea that British aircraft constructors would have nothing

to offer foreign buyers for years to come was unfounded. "They would have something good to offer in a matter of months," the announcement said. "Suitable types of British civil aircraft should be available for export before the war with Japan ended."

No fewer than 17 different designs, each built for a specific purpose and duty, "are either in production or in an advanced stage of development. They range from light, single-engined freight and passenger-carriers to an eight-engined transatlantic landplane weighing 110 tons."

The Society has indicated that the British builders will emphasize quality above everything else.

"The quality of British transport aircraft currently in use has already been amply proved. They hold records over some of the longest and most difficult routes at present operated, and preliminary calculations give every indication that still more records will fall to the new designs now coming forward."

"Great Britain's premier position in the sphere of aircraft export before the war



Helicopter Engine—This specially modified 450 hp R-985 Wasp Junior engine, front view shown, is now being built by Pratt & Whitney Aircraft Division, United Aircraft Corp., for helicopter installation. The principal modifications involve the relocation of engine accessories and other provisions to permit installation with the propeller shaft in a vertical rather than a horizontal position.

was won by the superior merits of the aircraft themselves in the face of keen and aggressive competition rather than by superior skill in salesmanship.

"Often, though by no means always, the price of a British aeroplane was higher than that of a rival, but qualities revealed by demonstration flights—of a kind the competitor would sometimes not attempt to emulate—frequently secured the order."

"Quality may again influence foreign buyers to choose British designs, but under the changed conditions brought about by the war, and by the preparations for it (which restricted British foreign sales) new methods are deemed necessary to make known the aircraft industry's products in the civil and military fields of aircraft manufacture."

Branch offices of the export section of the SBAC will be opened in most of the main business centers abroad. Regions now under consideration comprise the Dominions, India and the Far East, Latin America and the Middle East. Their activities will be supervised by a special export committee whose first chairman is F. G. Miles, the British aircraft designer and head of Miles Aircraft.

Each representative appointed will have a wide and thorough knowledge of the aircraft industry and of the conditions in the countries to which he is sent, the announcement said. "Qualities of diplomacy, business acumen and genuine liking for the given region and its people will rank high in the minds of the selectors."

Individual aircraft companies subscribing to the scheme will continue to have their own overseas salesmen and agents, and negotiations for contracts will be solely the concern of the individual firms.

The SBAC "ambassadors" will be expected to represent the aircraft industry as a whole, and to take all possible action likely to enhance the reputation of the British product.

"The scheme has Government approval and the SBAC has been assured of the help and cooperation of the appropriate Government departments."

Aircraft Computers



NAVIGATIONAL COMPUTER

Enables a pilot or navigator of aircraft to quickly and accurately solve dead reckoning navigational problems without mental arithmetic. It determines the relation between Air Speed, Ground Speed, Wind Direction and Velocity, Heading, Track and Magnetic Variation. It also incorporates a circular time-speed-distance slide rule, conversion tables and a combination Radio Beam and Timed Turn Indicator.

COX and STEVENS AIRCRAFT CORPORATION

P. O. Box 30

Mineola, N. Y.

WORLD'S PREMIER AIRPLANE FABRIC

LIGHTER

STRONGER

SMOOTHER

FLIGHTEX

FLIGHTEX FABRICS, INC. • 93 WORTH ST. • NEW YORK 13, N. Y.

Leading Manufacturers of
Fabric and Tapes for the
Aircraft Industry

FLIGHTEX FABRIC

Export Representative
AVIQUIPO, Inc.
25 Beaver Street, N. Y.
Cable #28 Aviquip

Lockheed, IAM Union Sign New Contract

Lockheed Aircraft Corp. and Aeronautical Industrial District Lodge 727 IAM-AFL are settling a wide field of union-company relations in a new contract which has averted an impending strike.

The contract, which replaced the agreement that has been in effect since September 1941, contains a clause, agreed to by both the company and the union, reading:

"For the duration of this agreement the union agrees that it will not cause or engage in any strike, slowdown or stoppage of work, and the company agrees that it will not cause or engage in any lockout."

Covered in the new agreement are union-company relations, grievance procedure and arbitration, seniority, layoffs and rehiring, promotions, upgrading, transfers, employment conditions and employee privileges. The agreement remains in effect until July 1, 1946.

Boeing Has Postwar Plans for Wichita

Boeing Airplane Co. has a postwar aviation program for the Wichita plants aimed at utilizing as far as possible the facilities and organization now devoted to the B-29, according to "Boeing Plane Talk," a company house organ of the Wichita division. In addition, the paper reported, Boeing is, and has been for some time, negotiating with a large eastern manufacturer for the establishment of a postwar production project in Wichita which would utilize the facilities and organization not needed for aircraft and related products.

Johnson Heads Air Division Of California Texas Oil

Col. Bernard F. Johnson, who was awarded the Legion of Merit for his work in the European-African theater in procuring and distributing petroleum products has just been released by the Army

Air Forces and has returned to the California Texas Oil Co. Ltd., to head the Aviation Division, with headquarters in New York.

In his supervision of the testing and experimentation of petroleum products to increase the efficiency of Allied planes, it was

found that the operational use of super-grade aviation fuel in fighter aircraft materially increased their performance.

Col. Johnson has an aeronautical rating as a twin-engine Army aircraft pilot. A specialist in chemical engineering at Texas A&M, Columbia University and Shanghai University, he was a member of the executive committee of the British War Cabinet Oil Control Board.



Johnson

Magruder Named Director of Commercial Sales For Glenn Martin; Three Others Get New Jobs



Stansbury

Humpstone

Soenke

Magruder

The Glenn L. Martin Co. announces the appointment of Peyton M. Magruder, formerly chief of new design, and the man responsible for the B-26 Marauder, as director of commercial sales. John H. Humpstone, project business manager of B-29 production, was named assistant director of the commercial sales group in charge of export sales; Howard Stansbury, recently on the staff of the vice

president-engineering, was promoted to sales engineer for the Mars and other flying boats; and John E. Soenke, until recently company representative at Wright Field, was selected to handle domestic commercial sales and serve as manager of special projects. Until the end of the war, the new appointees will handle their new activities in addition to present war assignments.

Details of G-M 2-Cycle Engine Revealed

Details of the General Motors two-cycle airplane engine have been disclosed in "Aircraft Engines of the World 1945". It is one of the most widely discussed engines under development today. Designated as the X-250-D, it is listed as a four cylinder, liquid-cooled 90 degree X-type engine with a normal and take-off rating of 200 hp at 2,500 rpm, and a cruise rating of 150 hp at 2,250 rpm at sea level. Height is given as 31 in., width as 27.7 in., and length 41.4 in. Frontal area is 6 sq. ft. The X-250-D has a displacement of 250 cu. in. and weighs 275 lb. or 1.37 lbs. per hp. Fuel consumption at cruise is .58 lbs. per hp per hr., and oil consumption .0025 lbs. per hp per hr. It is designed for 91/96 grade gasoline, and has been test flown.

125 Types of Surplus Military Craft Approved by CAA for Civilian Flying

A TOTAL OF 125 types of surplus military aircraft have been approved by the CAA as being suitable for civilian flying since the beginning of the RFC's aircraft disposal program last year, it was announced last fortnight.

An additional eight aircraft and two gliders were undergoing tests at the CAA's military test base at Bush field, Augusta, Ga., looking toward their approval for civil certification.

More than 130 have been rejected by CAA for civilian use. Bulk of these are tactical aircraft such as bombers, fighters, special trainers, and other types built especially for war use. RFC has approximately 6000 of these ineligible aircraft in surplus.

Aircraft and gliders now undergoing tests include: Planes—North American BT-14, BC-1A, BT-9C; Douglas UC-97, C-38, and B-18; Noorduy UC-64; Northrop A-17A. Gliders—Waco CG-34; Schweizer TG-3A.

The following models of service planes are eligible for certification as civil aircraft upon individual compliance with CAA instructions and bulletins (listings are by manufacturer or make and service model with commercial model or equivalent shown parenthetically):

Liaison
Taylorcraft: L-3 (DC-65), L-2A (DCO-65), L-2B (DCO-65), L-3C (DC-65), L-3D (DC-65), L-3E (DF-65), L-3F (BL-65), L-3H (BC-12-65), L-3J (BL-12-65), L-3K (BF-12-65), L-3M (DCO-65)
Aerobacs
L-3 (65-TC), L-3A (O-38A), L-3B (O-38 B), L-3C (O-38B), L-3D (TAF-65), L-3E (TAC-65), L-3F (65-CA), L-3G (65-LB)
Piper
L-4 (J3C-65), L-4A (J3C-65), L-4B (J3C-65), L-4C (J3D-65), L-4D (J3F-65), L-4E (J4E), L-4F (J3A), L-4G (J3B), L-4H (J3C-65)
Interstate
L-6 (S-1B1)
Stinson
L-9B (10A), L-13 (SR-5A), L-13A (SM-7B)
Trainers
Beechcraft: AT-7, AT-7A, AT-7B, AT-7C
Cessna: AT-17 (T-50)
Boeing: N2B-1 (A-7EN-1), N2B-3 (A-7EN-1), N2B-4 (A-7EN-1), PT-17 (A-7EN-1), PT-17A (A-7EN-1), PT-27 (D-75N-1)
Navy: N2N-3
Fairchild: PT-19 (M-62A), PT-19A (M-62A), PT-19B (M-62A), PT-23 (M-62A), PT-25 (M-62A-3)
Ryan: PT-22 (ST-3KR), PT-22A (ST-3KR)
Utility Cargo and Transport
Douglas: C-32A (DC-2), C-34 (DC-2), C-47A (DC3-S1C3G), C-49 (DC3-G302A), C-53 (DC3A-S1C3), C-53 (DC3-S1C3G)
Lockheed: C-57 (15-06), C-59 (15-07), C-60 (15-56), JO-2 (12A), UC-36A (10A), UC-40 (12A), UC-40A (12A)

Utility Cargo and Transport (Continued)

Boeing: C-73 (247D)
 Edd: RB-12 (RB-1)
 Fairchild: GK-1 (34 Series), UC-61 (34W-41), UC-61A (34W-41A), UC 61B (34J), UC-61C (34R-9), UC-61E (34K), UC-61G (34W-40), UC-61H (34G), UC-61J (34C8-F), UC-86 (34R40)
 Beechcraft: UC-43 (1), UC-43A (D-17R), UC-43C (F-17D), UC-43D (E-17B), UC-43E (C-17R), UC-43F (D-17A), UC-43G (C-17B), UC-43H (B-17R)
 Howard: UC-70 (DGA-15P) UC-70B (DGA-15J)
 Spartan: UC-71 (7W)
 Waco: UC-72 (SRE), UC-72B (EGC-8), UC-72C (HRE), UC-72D (VKS-7), UC-72E (ZGC-7), UC-72H (ZQC-6), UC-72K (YKS-7), UC-72M (ZKS-7)
 Cessna: UC-77B (C-34), UC-78 (T-50), UC-94 (24R40)
 Harlow: UC-80 (PJC-2)
 Stinson: UC-81 (SR-8B), UC-81A (SR-10G), UC-81B (SR-8D), UC-81C (SR-9C), UC-81E (SR-9F), UC-81F (SR-10F), UC-81G (SR-9D), UC-81J (SR-9E), UC-81K (SR-10C), UC-81M (SR-9E [M])
 Commonwealth: UC-102 (9000-ICR), UC-102A (8135) (Rearwin)
 Grumman: UC-103 (G32A)
Gliners
 Frankfort: TG-1A (B), XTG-1 (B)
 Schweizer: TG-2 (SGS2-8)
 Aeronca: TG-5 (G-3), XLNR 1 (G-3)
 Taylorcraft: TG-6 (ST-100)
 Piper: TG-8 (TG-8), XLNP-1 (TG-8)
 Pratt Read: TG-32 (PR-G1)
 Laister Kauffman: TG-4A (LK-10A)
 Sailplane: XTG-9 (BG-6), XTG-13 (BG-8), XTG-12A (BG-6) (Brigleb)
Amphibian
 Grumman: OA-14 (G-44)

Northrop, Fairchild Get New Contracts

Two major aircraft orders, the first to be placed since VE-Day, are announced. Northrop Aircraft, Inc., has received a new contract calling for the production of \$25,000,000 worth of additional Black Widow fighters, according to LaMotte T. Cohu, general manager and chairman. Cohu said the new contract means 2,000 additional production workers are needed and peak production will be required throughout 1946. The latest order gives Northrop a backlog of \$146,000,000.

The Army Air Forces have doubled Fairchild contracts for the C-82 Packet, the Fairchild Aircraft Division announced. At the same time the contracts were converted to a fixed price basis. The announcement added that additional workers are needed urgently at the Fairchild Hagerstown assembly plant if production schedules are to be met.

Colonel Cover Honored

Col. Carl A. Cover, manager and vice president of Bell Aircraft Corporation's Georgia Division and former vice president of Douglas Aircraft Co., has been awarded the Legion of Merit posthumously "for meritorious conduct . . . as chief of the Modification Section in the Production Division of the Army Air Forces Material Command . . . directing the operations of modification centers in preparing the B-29 for combat." Col. Cover was killed November 27, 1944 in an airplane accident at Wright Field. For 13 years, with a single exception, he was the first to fly every new model turned out by Douglas Aircraft Co.

North American Expert Wins Plastics Award

William I. Beach, chief plastics engineer for North American Aviation, has been awarded the 1944 John Wesley Hyatt award for distinguished contributions to the plastics industry.



Beach

The award was made June 14 at the annual award dinner at the Waldorf-Astoria Hotel, New York, in recognition of Beach's research in the development of a process for plastics forming by methods competitive with metal forming techniques. The award was established in 1941 by the Hercules Powder Co., in honor of the inventor of celluloid.

Douglas Asks Information From Prospective Buyers

New DC-3 airplanes now being produced at one of the Douglas plants under the U. S. Army Air Force, model No. C-117A, will soon be made available to commercial airlines, both foreign and domestic, it is reported.

In order to assist in determining the amount of material needed for manufacturing these ships, as well as price and delivery schedules, the company has requested that all interested in obtaining these planes immediately airmail them the following information:

(1) Complete name of company, address, ownership, business and nationality; (2) Quantity required; (3) National and International routes presently served; (4) Statement of use for which the equipment is required; (5) Urgency of need with relationship to war effort, reconstruction or rehabilitation; and (6) Description of operations and maintenance facilities.

Any information so received, the company states, will be treated with strictest confidence.



Completes 20 Years— William H. Schwebel (right), secretary and comptroller of Fairchild Engine and Airplane Corp., is shown being congratulated by Sherman M. Fairchild, chairman of the company's board, on the completion of 20 years of service with Fairchild and predecessor companies.

Convair to Get New Contract for TBVs

An additional contract for TBV Sea Wolf torpedo bombers is to be awarded the Allentown Division of Consolidated Vultee Aircraft Corp., the company announces. A letter of intent has been signed by Navy and Convair officials authorizing the company to place all subcontracts and purchase orders for materials or components required. Neither the number of planes involved or the dollar value of the contract can be revealed for security reasons.

Aircraft Industries Ass'n Becomes ACCA's New Name

"Aircraft Industries Association of America, Inc." on June 20 officially became the new name of the old Aeronautical Chamber of Commerce of America by which the aircraft industry's trade organization had been known for a quarter century.

"The name change was voted by the Association's membership to avoid confusion of the aircraft organization with chambers of commerce and other aeronautical bodies," spokesmen said. Aircraft Industries Association shortly will issue a booklet outlining its purposes, its organizational setup, and its services.

Army, Navy Production To Taper Off Gradually

Even with recently announced cutbacks, the combined aircraft program of the Army Air Forces and Navy calls for a rate of production in the last quarter of 1945 only 29% lower than in the first quarter, WPB Chairman J. A. Krug has announced. He asks for the "continued excellent support of the aircraft industry" to produce the many planes still needed for the Japanese war.

Aircraft production in May, the WPB Chairman revealed, was over its schedule of 6345 with a total of 6354 planes produced compared to April production of 6412. Airframe weight totaled 71,600,000 pounds, a reduction of 3% from the April weight figure. In accordance with the schedule, a drop in the average weight of production per working day was noted with 235 aircraft produced per day as against 256 per day in April.

Broken down into primary classes production equalled: Bombers, 2168 acceptances, 2135 scheduled, 7% above schedule; Fighters and Naval Reconnaissance, 3019 acceptances, 3030 scheduled, 4% below schedule; Transports, 617 acceptances, 636 scheduled, 3% below schedule; Trainers, 184 acceptances, 150 scheduled, 22.7% above schedule; special purpose, 366 acceptances, 376 scheduled, 2.7% below schedule.

Oiling Saves Manhours

One of the larger aircraft plants is now oiling all aluminum and magnesium sheet as soon as it arrives, according to "Modern Metals." The oiling has eliminated practically all marring and scratching during machining, and has saved countless manhours formerly required to burnish out such defects.



Gosselt Welch Harrower

Arthur E. Welch, formerly secretary-treasurer of Aircon Manufacturing Corp., has been named vice president and treasurer. Ralph E. Middleton, formerly chief engineer, was advanced to vice president in charge of engineering at the company's hydraulics Division in Burbank, Calif. William T. Gosselt has been elected general counsel of Bendix Aviation Corp.

Donald O. Kocmich, formerly connected with the Otis Elevator Co., has been appointed vice president of the Trimount Instrument Co. in Chicago.

Timothy E. Colvin, president of Aerco Corporation, has been named general chairman of the Los Angeles Aviation War Conference.

Transport Users Conference To Cover a Broad Field

The Air Transport Users Conference to be held under the auspices of the National Aeronautics Association in Washington July 9 and 10 will attempt to cover all phases of air transportation both international and domestic.

The tentative program includes forums and discussions of the commercial air transportation potential for the community, the scheduled and nonscheduled carrier; the equipment required for passenger and cargo and the experiences of Air Transport Command in cargo shipping. The problems and opportunities for air transport of automobile parts and accessories, aviation products, furs, ready to wear, general mail order, newspapers, drugs, sea food, meat, flowers and agricultural products will be discussed. Other topics are terminals and auxiliary facilities for traffic, passengers and cargo and coordination of air and surface transportation at the terminal, state legislation, international air transport and the women's point of view on air transportation.

Speakers will include, L. Welch Pogue, chairman of CAB; Harry Meixell, State Relations Manager of Air Transport Association; Fred B. Collins, Sales Manager of Boeing Aircraft Corp.; Joseph Garside, Wiggins Airways, Inc.; and Glen B. Eastburn, vice-president of NAA.

Standardization Group Conceived by Army, Navy

Army and Navy recognition of the importance of standardization in aircraft engines as well as in airframes has led to the formation of a special subcommittee on A. N. Standard Parts to work under the Engine Technical Committee of the Aeronautical Chamber of Commerce, it is announced by ACCA.

Request for establishment of the Committee came from the Aeronautical Board, composed of Army and Navy Aviation technical men, constituting formal recognition of the role played in warplane production by the National Aircraft Standards Committee, it was pointed out.

Manufacturing Personnel



Colvin Martin Earle

A. C. Martin has been appointed manager of the airplane tire department of the United States Rubber Co., succeeding R. E. Hedlund, resigned. Dr. Shao Wen Yuan has resigned from the Helicopter Research Division of McDonnell Aircraft Corp., to do research work at the Polytechnic Institute of Brooklyn.

Theodore W. Gibson, previously assistant superintendent of maintenance for Braniff Airways, at Dallas, has been named superintendent of maintenance for the airline.

Joseph Rose has been awarded a twenty-year service pin from the Hamilton Standard Propeller Division of United Aircraft Corp. He is the youngest employee of the company ever to receive the award.

Stanley W. Bedell has been appointed export sales manager of the Sperry Gyroscope Co., succeeding the late Howard Welch.

Maj. Thomas D. Neelands has been elected to the board of directors of Beech Aircraft Corp., replacing E. C. Moriarty, resigned.

C. U. Wells, superintendent of Fresno operations for Lockheed Aircraft Corp. has assumed charge of the remaining operations at Bakersfield. Jack Sheetz, superintendent of the two Bakersfield plants, has become superintendent of the Lockheed subplant at Santa Barbara. Harvey G. Trembley,

Convair-Ft. Worth Foresees 50 Percent Cutback by Fall

It has been estimated that the Fort Worth division of Consolidated Vultee Aircraft Corp. may undergo a 50% reduction in employment by fall as a result of the recent War Dept. cutback in B-32 Dominator production, according to "The Eagle", Fort Worth division house organ. The paper adds that new projects at the division, some of which are in the experimental stage, are absorbing some of the displaced employees, and that continuance of the present B-32 schedule through December will permit an orderly lay-off of personnel and the absorption of the termines into other war and peacetime industries.

Shell Lab to Test Jet Fuels

A new laboratory for the study of fuels and lubricants for jet-propulsion aircraft has been built and put into operation at Wood River, Ill., by the Shell Oil Co. A special jet burner has been installed for which fuel is furnished by ten 5000 gal. tanks, and compressed air is supplied by a 1000 hp compressor the size of a six-room house. The Army Air Forces have called a technical meeting at the new laboratory for the near future, at which time latest findings in the field of jet-propulsion and combustion turbine fuels will be discussed by technologists from the Army, Navy, and oil companies.



Bedell Buhner Rose

superintendent of the Santa Barbara works, has become assistant superintendent of the large A-2 plant in Burbank.

Joe E. Earle has been named district manager of the B. F. Goodrich Company's Automotive & Aviation Divisions in Los Angeles, succeeding G. E. Brunner.

Frederick W. Rohde, formerly chief inspector at Jacobs Aircraft Engine Co., has been appointed manager of quality control at Westinghouse Electric Corp's Aviation Gas Turbine Division.

Clyde C. Schner, formerly vice president in charge of sales of Tungol Lamp Works, has been named vice president of the Lawrence Aeronautical Corp.

John C. Harrower has been named vice president of Air Associates, Inc. in charge of sales and engineering. He was formerly sales manager for Eclipse Aviation Division of Bendix Aviation Corp.

George S. Garrard, former assistant chief engineer at Jacobs Aircraft Engine Co., has been appointed chief engineer of Briggs Clarifier Co. in Washington, D. C.

R. W. Richardson has been named manager of the newly organized Aviation Products Division of the Goodyear Tire & Rubber Co.

James L. Kelley, division manager at the Consolidated Vultee Aircraft Corp., San Diego plant, has taken on added duties as division manager at Tucson, succeeding W. R. Lawrence, who has been transferred to Convair's Nashville plant.

Horner Suggests Peacetime Engine Output Be Kept High

H. M. Horner, president of United Aircraft Corp., in a speech before the Hartford, Conn. Chapter, American Society of Tool Engineers, recommended a simple formula for peacetime aircraft engine production which would be geared to what military authorities would determine was the country's aircraft engine needs in the first year of a future war.

On a uniform rating basis wherein all engine production was reduced to the same horsepower, Horner said, the output was around 2,000 a year in the early 1930's, 4,000 per year by 1938, "but in 1944 this country produced better than 450,000 of these engines—an increase from 4,000 per year to 450,000 per year in six years."

After outlining methods whereby production schedules can be increased, Horner said that by working back from the production required in the first year after attack, a required rate of preparedness production can be arrived at. For purposes of simplification, he used engine production figures which are indicative of the overall production in the industry of corresponding pounds of airframes, instruments, or propellers.

New Work at Timm-Larson

Work on a totally new and different Navy Contract was started at Timm-Larson Aircraft Co., Chandler Field, Calif., with the arrival of two Model GH's, Navy Personnel transports, which were flown in to the plant at Fresno, and are now undergoing complete overhaul. This represents the first of a number of similar aircraft which will be flown to Timm-Larson, completely overhauled and flown away.

Convair Ideas Save \$3,600,000

More than three and one-half million man-hours, representing more than \$3,600,000, were saved as a result of ideas suggested by employees of Consolidated Vultee Aircraft Corporation's San Diego division in the past six months. During the period, more than 3000 cost improvement ideas were submitted by supervisors. The 1200 accepted saved approximately 3,300,000 man-hours, or an estimated \$3,300,000.

Martin 'Error-Proof' Photo Process

An "error-proof" photographic method for measuring airplane take-offs and landings has been developed by W. B. O'Neal, assistant chief power plant engineer, and William P. Zimmerman, chief photographer of the Glenn L. Martin Co. It is based on a camera enclosed grid exposed on movie film used in the method. It replaces the older plan of photographing the moving plane through a large screen, and eliminates difficulties involved in diaphragm openings and securing super-speed films previously needed.

G-E Set Up Flight Lab. Base

General Electric Co. will soon establish a base for flying laboratories at the Schenectady County Airport. Work on a 160x180-ft. hangar and ground laboratory will begin immediately, the company reports, and the completed project will include two floors of laboratories, work rooms and offices, and a high control tower with all of the latest electronic and mechanical equipment. The development will serve as a test headquarters for the newly created G-E Flight Test Division, headed by C. G. Talbot as manager, and N. F. Frischhertz as assistant manager.

Allied Appliance Enters Plastics

Allied Appliance Co., manufacturers of aircraft and automotive valves, fittings and other automatic screw machine products announces change of name and ownership to Allied Appliance and Plastic Co. The company is now broadening facilities by adding a Plastics Division specializing in designing, fabricating and molding of plastic parts. Address of the firm is 1014 North La Brea Avenue, Los Angeles 38, Calif.

Continental-Muskegon Shut Down

Due to contract cancellations amounting to approximately \$66,000,000, Continental Aviation and Engineering Corp., Muskegon, Mich.—a subsidiary of Continental Motors Corp.—was to virtually shut down July 1. CAE employed about 3,500 workers. The latest cutback covered a \$10,000,000 contract for production of Pratt & Whitney engines, Model R-985 and parts. Production on this model had not yet been started. On May 11, the War department cancelled \$36,000,000 worth of contracts involving aircraft engines.

Convair Needs Help at Allentown

Consolidated Vultee Aircraft Corp. needs additional help for its Allentown Division engineering, shop and tool departments, and is inviting employees at its Vultee Field Division who qualify to request transfers. Transportation to Pennsylvania will be provided for those given the transfers, according to "The

Vultair", a company house organ. At the same time the company announced that the second shift would be dropped at Vultee Field as a result of recent AAF cutbacks, but that work will continue on Navy contracts. Approximately 1,500 employees will be laid off.

Martin Gets Added Contracts

The Glenn L. Martin Co. announces that its war responsibilities have been largely increased of late. Operations of an undisclosed nature, it said, have been added to the production of JRM Mars transports, PBM-5 Mariner patrol bombers, B-29 Superfortresses at Omaha, and power-operated gun turrets for the Army and Navy.

\$203,440 Project at Hughes

Hughes Aircraft Co. has been authorized by WPB to commence construction of a graving dock and buildings at Long Beach. This \$203,440 project is for the purpose of assembly and launching the HK-1 flying boat now nearing completion at the Hughes Aircraft plant in Culver City.

Ground Test for JRM

The first Martin JRM Mars moved out of Final Assembly and into Ground Test June 16. The big flying boat was "launched" at the Martin company ramp and towed to the airport where it was pulled ashore for ground testing and installation of the giant fin and rudder.

Boeing Report on B-29s

On the anniversary of the first Boeing B-29 combat mission against the Japanese homeland, the raid on Yawata June 15, 1944, the Boeing Aircraft Co. revealed it has produced 2,075 Superforts at its Seattle-Renton and Wichita, Kan., plants, plus the equivalent of 149 additional B-29s in spare parts—total airplanes or equivalent parts, 2,224.

1,000 Outboard Wings by Fisher

Fisher Body's Cleveland Aircraft Plant (No. 2) has produced more than 1,000 sets of outboard wings for the mighty B-29 Superfortress since September, 1943. It was said output of the major wing assemblies, which comprise 40 per cent of the entire B-29 wing span, required more than 1,000,000 man hours.

'Little Dipper' Revealed

"Plane Fax," issued by the Aviation Division of the Standard Oil Company of California, makes the first mention of Lockheed's postwar lightplane, "Little Dipper." In listing an advance view of what the private plane shopper may expect to find displayed in the postwar lightplane market, "Plane Fax" notes Lockheed's "Little Dipper" as having one seat, take-off horsepower of 40, cruising speed of 90 miles an hour and a price of \$800.

Republic Opens New Office in New York

Republic Aviation Corp. has opened a New York City engineering office at 42 Broadway as a permanent adjunct of its Farmingdale engineering department. The staff, which is planned to develop to a personnel of 350 aerodynamic engineers and draftsmen, will work

Hapke Heads Petroleum Institute's Air Section

A. T. Hapke, Jr., for more than two years market research manager of Republic Aviation Corp., in which position he participated actively in the work of the various aviation trade associations, has joined the staff of the American Petroleum Industries Committee of the American Petroleum Institute, New York, to head its newly



Hapke

created aviation section. The new section will concern itself with problems relating to taxation, the financing of aircraft landing facilities, and related matters.

Before joining Republic, he was advertising manager of Bell Aircraft Corp. from 1940-42, and prior to that on the Chicago advertising staff of Collier's. In 1936 and 1937, as a pilot for Pan American Airways, he flew all of the Eastern division's routes through the Caribbean and South America.

on all future military and commercial projects. A nucleus staff for this new department has already been formed, and it will be augmented by additional draftsmen, stress analysts, weight engineers and aerodynamicists in the near future.

'Packet' Gets Tests

Preliminary flight tests of the Fairchild C-82 Packet show a cruising speed of over 200 mph at 10,000 ft. in military operation as against an expected cruising speed of 180 mph. Ground run for take-off at 42,000 lbs. gross weight is 800 ft. and only 1,800 ft. are required to clear a 50-ft. obstacle. The tests further showed the Packet's service ceiling as over 22,000 ft. and single-engine ceiling as 8,000 ft.

N-K Notified of Cutback

Nash-Kelvinator has been officially notified of a major cutback in propeller requirements for British bombers and fighter planes. Under the revised schedule, he said, propeller production for the RAF and RCAF will terminate about July 15.

27,000 Douglas Military Planes

Douglas Aircraft Co. has produced over 27,000 warplanes, representing approximately one-sixth of the nation's output. These include 7,006 A-30 Havoc fighter bombers, 5,936 B-24 Dauntless and A-24 divebombers, more than 9,000 C-47 Skytrain and C-53 Skytrooper transports, and thousands of B-17 Fortress and B-24 Liberator heavy bombers. Still restricted as a military secret are the actual totals of C-54s and A-36s produced.

Plans to Continue Gear Work

The Detroit Gear division, Borg Warner Corp., plans to continue manufacture of helicopter transmissions and other aircraft gearing after the war. H. H. Whittingham, vice president, announces. He said the experience gained in this close-tolerance production will prove invaluable in postwar work, not only in aircraft gear output, but in automotive parts manufacture. Today the company is the nation's largest producer of helicopter gearing.

Westinghouse Jet Demonstration

Military jet propulsion engines ranging from 2 midget the size of an artillery shell to a large hog sized version were demon-



LIGHT landings for HEAVYweights!

To help make safe landings, giant transport planes, such as the Constellation illustrated, are equipped with AEROLS (Cleveland Pneumatic shock absorbing landing gear). By protecting plane, crew and cargo, AEROLS contribute substantially to aviation's progress—as planes grow in size, weight and speed, AEROLS help solve their landing problems. ♦ Our major products, used in many industrial fields, are mentioned below. Whatever your needs, Cleveland Pneumatic engineers offer you the benefit of over 50 years manufacturing experience.

THE CLEVELAND PNEUMATIC TOOL CO., Cleveland 5, Ohio

Speed Final Victory! Buy MORE War Bonds



CLEVELAND PNEUMATIC



Sign of the Times

So you're going to operate an air taxi! Well, it may not be long, now . . . you'll put the finishing touches on the sign over the office door, insert your first ad in the daily paper, and take up a strategic position by the telephone to greet your first customer.

But in planning and working for this big moment, you will have faced three paramount requirements of successful operation: safety in flight operation and

navigation, economy of operation, and ability to render around-the-clock, around-the-calendar service to the public.

You will find the answer to these requirements in high quality instrumentation — *complete* instrumentation. And it is in this phase of commercial aircraft operation that Kollsman can serve you. Kollsman Aircraft Instruments have played a vital part in the success of the nation's airlines since their earliest days.

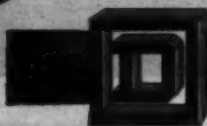
Whatever your operation is to be, Kollsman accuracy and dependability can be one of your greatest assets, too!



Write today for our interesting and informative booklet "Facts About Kollsman Aircraft Instruments." Kollsman Instrument Division, Square D Company, 80-20 45th Ave., Elmhurst, New York.

KOLLSMAN AIRCRAFT INSTRUMENTS

PRODUCT OF



SQUARE D COMPANY

ELMHURST, NEW YORK

GLENDALE, CALIFORNIA

strated on test stands recently to a group of Eastern aircraft manufacturers and engineers at the Philadelphia plant of the Westinghouse Electric Corp. Aviation Gas Turbine Division. G. H. Woodward, division manager, said that as soon as military demand permits, a part of the company's manufacturing facilities will be devoted to production of commercial versions of the present military engines. These postwar designs, however, will have propellers, he said.

Douglas Jobs For Lockheed Terminous

Douglas Aircraft Co. and the International Association of Machinists have completed an arrangement whereby workers laid off by Lockheed because of recent cutbacks can get jobs at the Douglas Santa Monica and El Segundo plants, according to the "American Aeronaut" union paper published by Lodge 727. The Santa Monica plant needs 2,000 employees for C-54 production, and the El Segundo plant a somewhat smaller number. The openings are mostly in production, riveting and assembly line work, with a few tool and die positions to fill. No office or white collar jobs are open at the present time, the union paper reports.

Completes 9,468th Liberator

The 9,468th Liberator built by Consolidated Vultee Aircraft Corp. rolled off the assembly line in San Diego last fortnight, marking the end of B-24 production at Convair. The company now plans to expand its experimental operations on military projects and commercial transport types. The final Liberator was the 6,725th built at San Diego.

Republic-Indiana Plant-Wide Vacations

The Indiana division of Republic Aviation Corp. will have a plant wide vacation for both employees and management from the close of work on June 29 to resumption on the morning of July 9. It will be the first plant-wide vacation and holiday since the beginning of the war. Each employee continuously employed since June 1, 1944, will receive one week's pay at his rate of May 31, 1945.

Automatic Flying Foreseen

Completely automatic flying in which the pilot merely climbs into the plane, adjusts a few dials and then sits back while the plane automatically takes off, carries him to his destination and lands was predicted as a definite postwar possibility today by engineers of the General Electric Co. Their forecasts were based on wartime development of the high precision gyroscope.

Convair Installs Color Control

Consolidated Vultee Aircraft Corp. has installed a color control system at the B-32 modification department of its Fort Worth plant. Each of 10 work stations along the assembly line is designated by a different color and is clearly shown on a color control board hung beside the plane itself.

C-W Columbus Plant Cited

The Columbus plant of Curtiss-Wright Corp., Airplane Division, has been commended by Rear Admiral DeWitt C. Ramsey, chief of the Bureau of Aeronautics, for having completed 18 consecutive months of one-schedule production.

Lawrence Gives War Certificate

Lawrence Aeronautical Corp. is now giving all employees a certificate of service in war work. The employee's name is inscribed on the certificate which is suitable for framing. The company believes that the certificates will serve to point out the value of service on the home front.

Bendix-Pacific in St. Louis

Pacific Division, Bendix Aviation Corp., announces the opening of a sales-engineering office in the Continental Building, St. Louis, and has enlarged the New York office. The company has appointed Harold W. Bailey and William P. Harrison to act as sales-engineers in the new St. Louis offices. The New York offices of the company which are located in the Lincoln Building have been enlarged by the addition of Service Engineer Walter Bell. Judd W. Moody continues as sales-engineer in this district.

Wright Aero Vindicated

A special survey committee of the War Manpower Commission reports it has found no evidence of labor hoarding in the Paterson plants of Wright Aeronautical Corp., and has complimented the management on its low rate of absenteeism, low turnover, well organized hiring procedure, advanced program for the utilization of non-whites and well developed program for the placement of handicapped persons.

New Ryan Contract

Ryan Aeronautical Co. has received a new contract to design and manufacture \$800,000 worth of new type exhaust manifolds for Glenn L. Martin Company, San C. Breder, sales manager, announces. Production on the manifolds which will be used in Navy combat planes, is slated to begin in August with the order being completed by September, 1946.

Reconversions Costs Deducted

Costs incurred by a contractor in restoring his plant substantially to its preconversion operating layout will be treated as business expenses and allowed as deductions in the year they are incurred in measuring profits subject to income and excess profits taxes, according to explanation of applicable rules issued by the Internal Revenue Bureau to assist war contractors and tax collectors in determining what reconversion costs may be deducted. On the other hand, reconversion costs which either substantially improve or enlarge facilities, when compared with their preconversion status, will have to be capitalized and written off in subsequent years under the regular depreciation procedure.

7 Acres of Obsolete Tooling Will Be Sold As Scrap

Seven acres of obsolete aircraft tooling used to build Douglas A-20 Havoc fighter-bombers will be sold as scrap, Brig. Gen. Donald F. Stace, commanding Western District, Air Technical Service Command, announces. Stored on West Washington Boulevard at Glencoe, Los Angeles, the tooling consists of jigs fixtures, dies, templates and special tools used at the Douglas Santa Monica and Long Beach plants and the Boeing Seattle plant.

Estimated to weigh 1100 tons, and originally purchased for \$10,000,000, tooling is being offered to approved scrap dealers on the West Coast and as far east as Chicago under WPB and OPA Regulations. Notices have been sent out with regulations providing that a sealed bid, accompanied by a check made out to the U. S. Treasury must be turned in within 21 days.

Within one week after the final A-20 plane had been completed and accepted by the AAF on September 25, 1944, the Douglas plants had been cleared of all A-20 tooling, General Stace's announcement said.

Machine Tools Industry May Be Unable to Meet Demands of Reconversion

Members of the machine tools industry told the War Production Board at a recent Industry Advisory Committee meeting that they would be unable to meet increased demands for tools for reconversion and for war production without additional skilled and technical manpower. They asked that companies producing machine tools and metal forming and shaping machines be placed on the National Production Urgency List and given every aid in securing manpower and materials.

WPB officials told the committee that the industry might expect, in the near future, some relief from demands for new machines through the release of surplus tools held by the government.

Bell Aircraft to Celebrate 10th Anniversary July 10

Bell Aircraft Corp., celebrates its 10th anniversary July 10. The company's production record includes pioneering projects in jet propulsion, including the twin-engine P-59 Airacomet. It has also played an important role in the field of rotary-wing aircraft with the design and development of the Bell helicopter.

Other design developments include the XFM-1, the Airacuda, first of the cannon-carrying sky fighters. More than 9000 P-39 Airacobras were built by Bell, many of them going to Russia. The P-63 Kingcobra, successor to the Airacobra, likewise met with great success on the Russian front.

New Process for Aluminum Scrap Conversion Revealed

A new process for converting aluminum scrap into new aluminum has been developed by research engineers of the Aluminum Ore Co. working in conjunction with the Air Technical Service Command and the Redistribution and Salvage Office of the Army Air Forces, according to the Aluminum Co. of America. It is expected to play an important part in permitting the disposal of crashed, war weary and technically obsolete aircraft in a manner that will not make them a drag on the market. The metal obtained by the new method is the same as aluminum manufactured from bauxite, and can be used anywhere that any other commercially pure aluminum can be used.

Helium in Tires?

Helium gas instead of air can be used economically in the huge tires of Convair's 204 passenger Model 37 airliner to save weight. It was disclosed recently by Consolidated Vultee engineers. Air required to fill the tires would weigh 180 pounds compared with 26 pounds for helium. Tests have proved that the puncture proof tubes will hold the lighter helium gas at the required pressure. The 154 pounds saved by using helium means that extra payload can be carried, with increased revenue to the operator.

Aviation Corporation Acquires Control of Crosley

Assumes a Prominent Place in Radio Field

THE AVIATION CORP. has announced the purchase of a controlling interest in the Crosley Corp. from Powell Crosley, Jr. and family, thus adding an extensive line of home equipment and radar and electronic devices to its present holdings.

AVCO will also assume a prominent place in the radio broadcasting field, as the Crosley assets include station WLW, Cincinnati, a 50,000 watt clear channel transmitter, several FM and television experimental stations, and a contract to purchase station WINS, New York, subject to approval of the Federal Communications Commission. Because of these broadcasting facilities, the sale of the Crosley assets to AVCO are likewise subject to FCC approval.

The purchase does not include the Crosley automobile division representing less than three percent of the company's total assets, and Crosley plans to form a new company to manufacture the Crosley car.

Under terms of the purchase, AVCO acquires approximately 64 percent of the Crosley Corporation's 545,800 shares at a price of \$39 a share. A similar offer has been made to minority stockholders. Both are cash transactions involving a total commitment of \$22,000,000 and ten banks are participating in the bank credit arranged by AVCO to finance the purchase.

The acquisition will give AVCO a place of major importance in the postwar production and distribution of household appliances. The Crosley home equipment line includes radios, refrigerators, kitchen sinks and cabinets, gas and electric ranges, and home heating units.

In a joint statement, Victor Emanuel, chairman of the board, and Irving Babcock, president of the Aviation Corp., said:

"Joining of the Crosley Corp. and the Aviation Corp. is a move in the reconversion of AVCO from war to peacetime production . . . Supplementing products previously announced for manufacture by AVCO, the new expansion diversifies the line of AVCO products, strengthens its nationwide distributor and dealer organization, and augments its research facilities.

"For the present, both AVCO and Crosley will continue production for military requirements, but as government controls are lifted, they will move gradually into peacetime manufacturing.

"No change is planned in Crosley management policies or in operating personnel. Nor in entering the field of radio broadcasting does AVCO contemplate any change in the successful and public spirited policies of WLW."

Powell Crosley, Jr., will continue as a member of the Crosley board, and Lewis Crosley will remain as a vice president. Raymond C. Cosgrove, vice president-manufacturing, and James D. Shouse, vice president-broadcasting division, will likewise remain in their present positions and as directors.

AVCO's manufacturing units include Lycoming, Republic Aircraft Products and

Spencer Heister divisions, and the wholly owned American Propeller Corp. Associated companies are Consolidated Vultee Aircraft, New York Shipbuilding and American Central Manufacturing corporations. AVCO also has substantial investments in American Airlines, Pan-American World Airways, and Roosevelt Field, Inc.

Pan Am. Registers 3,986,522 Shares

Pan American Airways has filed with the Securities and Exchange Commission a registration statement covering 3,986,522 shares of \$2.50 par value capital stock. Half of this amount will be issued to present stockholders and the remainder reserved for issuance upon exercise of rights under stock purchase warrants.

Present stockholders would get 1,993,261 units on the basis of two units for each outstanding share held. A unit is defined as one share of common stock and a warrant to purchase an additional share at \$18 a share. The warrant purchase right expires Dec. 31, 1947.

Should stockholders fail to subscribe up to \$25,000,000 of the units, Atlas Corp., the underwriter, has guaranteed to take up enough units to bring the total to that figure, with the right to purchase in excess of \$25,000,000 if its so desires.

Offering price to shareholders will be the average of the closing price for a common stock share on the New York stock exchange for the 30 business days preceding the date of offering, but not to exceed the closing bid price on the day before the offering.

PAA Net Income Down Slightly

Pan American Airways reported net income of \$1,619,309 during 1944, compared with \$1,929,764 in 1943. Operating revenues totaled \$48,358,275 and operating expenses \$45,538,146 for the year ended Dec. 31, 1944.

Last year's gross business amounted to \$93,000,000, a decrease of \$33,000,000 over 1943. In 1939 and 1940, the last two prewar years, gross business amounted to \$20,600,000 and \$27,300,000 respectively.

Reported net income did not include mail pay to Africa and to and from Alaska, for which rates have not yet been finally determined by the CAB. Reported net income includes mail revenues based on the Latin American mail rates as tentatively proposed by the CAB in a pending proceeding.

The consolidated balance sheet listed total current assets at \$25,854,322 and total current liabilities at \$15,187,324. Total liabilities were \$88,965,359.

During 1944, Pan American flew 79,818,502 plane miles and carried more than 750,000 passengers 791,339,000 passenger miles. (The PAA record compares favorably with the five-year record of British Overseas Airways Corp., ending March

31, 1945, in which 519,410,775 passenger miles were flown during the five years, with 194,319,032 passenger miles flown in the year ended March 31. BOAC has 130 aircraft and 20,000 employees.)

The passenger figures did not include contract services to the armed forces. Up to January, 1945, Pan Am had flown on a contract basis 31,628,000 plane miles for the Naval Air Transport Service, 30,183,000 for the Air Transport Command, 18,151,000 for the Army in India-China and 6,865,000 for other government services.

Commercial service was provided to 46 countries during the year. Over 80,500 of the 98,582 miles of routes established by Pan American before Pearl Harbor were in operation at the end of 1944.

During 1944, Pan American-Grace Airways, Pan Am's 50%-owned affiliate, carried 84,206 passengers, and 2,000,000 pounds of cargo, not including cargo carried under special charter contract.

The report refers to a long-term underwriting agreement with Atlas Corp., with respect to additional shares to be offered to stockholders this month. Funds obtained will be used for future expansion, including the purchase of new equipment.

Pan American will purchase Lockheed Constellations, DC-7s, the Lockheed L-10 (Constitution) and the Consolidated-Vultee 6-engine CV-37, the report says.

Lear \$14,000,000 'VT' Loan

Lear, Inc., has completed arrangements for a \$14,000,000 "VT" loan commitment. This was made through RFC. The agreement runs for one year from April 17, 1945. At present only \$6,500,000 has been borrowed. As security, Lear has pledged all receivables covered by purchase orders with a value in excess of \$5,000; its inventory; and contract termination settlement proposals. In addition, it has given a mortgage on the real estate located at Piqua, O., and on chattels at Piqua and Grand Rapids, Mich.

Air Associates' 6-Months Report

Air Associates, Inc., in a report covering the six-months' period ended March 31, 1945, shows net profit of \$73,792 after all charges including a provision of \$49,195 for federal income taxes. This net profit is equivalent to \$5.55 per share on the 134,905 shares of Common Stock outstanding during the period and compares with a net profit of \$250,512 or \$2.85 per share on the same number of shares in the corresponding period of the previous fiscal year.

Noorduyn Standard Profit Set

A board of referees, acting under the terms of the Excess Profits Tax Act, has established the standard profit of Noorduyn Aviation, Inc., at \$350,000 per year commencing Jan. 1, 1945, the company announced today. Previously the directors had assumed the annual standard profit at a base figure of \$36,128 for the years 1940-1943 inclusive, and \$48,103 for 1944.

New Lear Stock Issue

A banking group headed by Kobbé, Gearhart & Co. has offered a new Lear, Inc. stock issue of 450,000 shares of 50c par common at \$5 a share. The proceeds will be used to finance postwar expansion plans including extension of present activities in electro-mechanical actuators and aviation radio.

DINKLER

ATLANTA
The Ansley
BIRMINGHAM
The Tutwiler
MONTGOMERY
The Jefferson Davis
MOBILE
The Battle House
NEW ORLEANS
The St. Charles
SAVANNAH
The Savannah
NASHVILLE
The Andrew Jackson
GREENSBORO
The O. Henry
Carling Dinkler, President
Carling Dinkler, Jr., Vice-Pres.
(In service)

HOTELS



**Need Trained Men Equipped
for LEADERSHIP in
Commercial Transport and
Fixed Base Operations?**

— Look to Parks —

In the fields of Aviation Operations Engineering, Aviation Maintenance Engineering, and Aeronautical Engineering, graduates of Parks Air College have advanced to such representative positions as these:

Meteorologist—Station Manager—
Crew Chief—Flight Engineer—
Assembly Chief—Production Engineer—
Group Leader—Liaison Engineer

Parks trained men have a long, proven record of winning and holding positions such as these in Aviation Operations Engineering, Aviation Maintenance Engineering, and Aeronautical Engineering.

Write or wire Oliver L. Parks, President, for full information about Parks Air College and Parks graduates.

PARKS AIR COLLEGE, INC.
East St. Louis, Illinois

Financial Reports

WAL Quarterly Report

Western Air Lines reports first-quarter net profit of \$117,607.45. The first-quarter earnings for 1945 contrast markedly with the first-quarter of last year, when shortage of equipment due to earlier requisitioning of planes by the Army resulted in a net first-quarter loss of \$17,564.52.

American 4-Months' Report

American Airlines reports net income for the four months ending April 30 of \$1,466,607, equal to \$1.13 on each of 1,290,568 outstanding shares. This compared with \$266,097, or 74c per share, for the first four months of 1944. Gross revenue was \$13,686,286, compared with \$10,253,097 for the same period last year.

Pan American Dividend

Pan American Airways paid on June 25 an initial dividend of 25c on the new \$2.50 par capital stock, created by the two-for-one split-up last February of the old \$5 par stock. Dividends of \$1 each were paid on the old stock each year from 1941 to 1944.

Hawaiian Nets \$75,208

In its 17th annual report, Hawaiian Airlines reports a net profit after taxes of \$75,208 for the year ended Dec. 31, 1944. Total operating revenues were \$1,729,107 and total operating expenses \$1,409,410, leaving a net operating income of \$319,697. Current assets as of Dec. 31 were \$738,414, and current liabilities \$463,266. Net worth was listed as \$1,745,108.

Solar Nets \$1.73 Per Share

Solar Aircraft Co., San Diego, Calif., reports net sales of \$23,436,331 for the 10 months ending Feb. 28, and net income of \$632,243 after provision of \$3,325,000 for refund under renegotiation, and deduction of \$1,783,000 for federal taxes, equal to \$1.73 each on 356,787 common shares.

Lockheed Dividend

Lockheed Aircraft Corporation has voted an interim dividend payment of 50 cents per share on the corporation's stock, payable July 3 to stockholders of record June 23. This dividend is the second to be announced this year by Lockheed. Robert E. Gross, President, said it is the company's policy to declare dividends from time to time as conditions warrant without establishing a schedule for regular payments.

Aerona Quarterly Report

Aerona Aircraft Corporation reports that net profit for the three months ended March 31 amounted, after taxes and provision for renegotiation, to \$65,800. Equal, after dividends on the preferred stock, to 35 cents per share on the common. This compared with net earnings of \$42,384 for the corresponding quarter of 1944.

L-K Files Registration Certificate

Laister-Kauffman Aircraft Corp. has filed a registration certificate covering 17,702 shares of \$25 par value 6% cumulative preferred stock, which it is proposed to offer publicly.

AIRCRAFT MANUFACTURERS

WHAT ABOUT YOUR ...

- SALES TRAINING PROGRAM
- MERCHANDISING PROGRAM
- TERRITORIES
- DISTRIBUTOR PROGRAM
- SURVEYS AND MARKET ANALYSIS

We can assist you—our staff has been close to these phases of Aviation for 20 years.

★

We invite your inquiry

Floyd O. Johnson and V. C. Rasmussen

AVIATION ASSOCIATES
Consultants to the Industry
544 N. MICHIGAN AVE. CHICAGO 11, ILL.

Approved as "standard equipment" by leading factory engineers and test pilots, Senenich Propellers may be depended upon for maximum performance, rapid on a Senenich!



on LUSCOMBE

Prompt repair service now available. If your wood propeller... regardless of its make... needs servicing or repair, send it to Senenich.

SENENICH BROTHERS — 4410 North
Lansdale Municipal Airport, Lansdale,
Pa. — West Coast Branch, Golden, Calif.

Advertisers

In this Issue

Advertisers	Page
Aeroquip Corp.	3rd Cover
Aircraft Mechanics, Inc.	74
American Airlines, Inc.	11
American Aviation Directory	13
Aviation Associates	85
B-H Aircraft Co.	72
Beech Aircraft Corp.	61
Bendix Aviation Corp., Scintilla Magneto Division	55
Boeing Airplane Co.	39
Chandler-Evans Corp.	59
Cleveland Pneumatic Tool Co.	81
Collins Radio Co.	43
Consolidated-Vultee Aircraft Corp., Stinson Division	34-35
Cox and Stevens Aircraft Corp.	76
Curtiss-Wright Corp., Commando Division	24-A
Curtiss-Wright Corp., Propeller Division	32-A
Dinkler Hotels Co., Inc.	85
Dow Chemical Co.	24-B
Fairchild Engine & Airplane Corp.	57
Flightex Fabrics, Inc.	76
Goodyear Aircraft Corp.	3
Guiberson Corp.	12
Hayes Industries, Inc.	5
Jack & Heintz, Inc.	44-45
Kellett Aircraft Corp.	53
Kollsman Instrument Co., Inc.	82
Koppers Co., Bartlett-Hayward Division	46
Littelfuse, Inc.	14
Luscombe Airplane Corp.	32-B
Glenn L. Martin Co.	31
Northrop Aircraft, Inc.	65
Parks Air College	85
Pennsylvania Central Airlines	51
Piper Aircraft Corp.	69
R. C. A. Victor Division, Radio Corp. of America	26-27
Radio Receptor Co., Inc.	63
Republic Aviation Corp.	2nd Cover
Rotel, Ltd.	67
Sensenich Bros.	85
Solar Aircraft Co.	73
Standard Oil Co. of California	29
The Texas Co.	Back Cover
Transcontinental & Western Air, Inc.	7
Vickers, Inc.	8
Wall Street Journal	71
Western Air Lines, Inc.	37
Whiting Corp.	10

Over - the - Counter Securities

	June 9		June 16	
Airlines	Bid	Ask	Bid	Ask
All American Aviation	9 1/4	10 1/4	10 1/4	10 1/4
American Airlines pfd.			Called 1/15 @ 100	
American Export Airlines	53		62	61
Braniff	23 1/2	sale	23 1/2	sale
Chicago & Southern common	10	10 1/4	20 1/4	20 1/4
Chicago & Southern warrants	11 1/4	11 1/4	12 1/4	12 1/4
Continental Airlines	15	16 1/2	17 1/4	18 1/4
Delta Air	33 1/2	34 1/2	35 1/2	36 1/2
Inland Airways	5 1/4	6 1/4	6 1/4	7 1/4
Mid-Continent	12 1/2	13 1/2	14 1/2	14 1/2
National Airlines	29 1/2	24	24	sale
Northeast Airlines	14 1/4	sale	14 1/4	sale
Manufacturers				
Aeronca	4 1/2	5 1/4	4 1/2	5
Air Associates	11 1/4	12	11 1/4	sale
Aircraft & Diesel	1 1/4	2 1/4	1 1/4	2
Aireon Mfg.	6 1/4	sale	8	sale
Airplane & Marine	5 1/4	6 1/4	5 1/4	6 1/4
Airplane Mfg. & Supply			4 1/4	4 1/4
Central Airports	1	2	1	2
Columbia Aircraft	50c	1	1	
Continental Aviation	2 1/4	3 1/4	2 1/4	3 1/4
Delaware Aircraft pfd.			about 25c bid	
General Aviation Equipment	3 1/4	1 1/4	1 1/4	1 1/4
Globe Aircraft	3 1/2	3 1/2	4 1/4	4 1/4
Harlow Aircraft	40c	60c	45c	65c
Harvill Corp. common	1 1/2	2 1/2	2 1/2	3 1/2
Interstate Aircraft & Engine	10 1/4	11	10 1/4	11 1/4
Jacobs Aircraft	6	sale	6 1/4	sale
Kellett Aircraft	2 1/2	2 1/2	2 1/2	3
Kinner Motors	1.20	1.25	1 1/4	1 1/4
Liberty Aircraft	12 1/4	10 1/4	14 1/4	14 1/4
Luscombe	1 1/2	bid	2	3 1/2
Menasco Mfg.	1 1/4	2	2 1/4	3
Northrop Aircraft common	3 1/4	sale	8 1/2	sale
Piper Aircraft common	4	4 1/4	4	4 1/4
Piper Aircraft pfd.	Final liquidation of 70c at Farmers National Bank			
Rohr Aircraft	10	10 1/4	11 1/4	11 1/4
Standard Aircraft Products			60c	70c
Taylorcraft common	2 1/2	2 1/2	2 1/2	3 1/4
Taylorcraft pfd.	7 1/4	8	7 1/4	8 1/4
Timm	95c	1.10	1	1.10
United Aircraft Products pfd.	18 1/4	19 1/4	19	19 1/4

Classified Advertising

TRAFFIC POSITION DESIRED. Applicant, 44 years of age, having considerable experience with freight rates, tariffs, services and solicitation of surface carriers desires connection in traffic and sales division of air carrier. Served on local and national rate and tariff committees and is presently engaged in work of war transportation agency. Familiar with procedure of state and interstate regulatory bodies, also with air rate tariff legislation and air routes. Box 440, AMERICAN AVIATION, American Bldg., Washington 4, D. C.

ATTENTION: Aviation Companies (Manufacturers-Airlines-Operators). We are adequately set up and possess the experience, contacts, "know-how," qualifications and ability to render an exclusive type of Representative-Liaison Service. Your inquiries are invited. "CY-ET" Aviation Suppliers, 734

Albee Building, 1426 G St., N. W., Washington 5, D. C.

WATCHES WANTED. Broken or usable, all kinds, even Ingersolls, highest prices paid for jewelry, rings, spectacles, alarm clocks, razors, cigarette lighters, gold teeth, etc. Cash mailed promptly. Lowe's Holland Bldg., St. Louis 1, Mo.

AVIATION POSITION WANTED: Applicant seeking permanent position in aviation. Experience: three years mechanical engineering student; one year lay-out drafting and engineering sales; three years army pilot; two years airline pilot; three years test pilot. Presently employed as executive transport pilot in aviation war program. Interested in airlines, airports, manufacturing sales. Box 436, American Aviation, American Building, Washington 4, D. C.